



XXVI
IFSO WORLD
CONGRESS
OF BARIATRIC & METABOLIC SURGERY

NAPLES, ITALY
AUGUST 30-SEPTEMBER 1, 2023

Congress President: Prof. Luigi Angrisani

ABSTRACTS BOOK

www.ifso2023.org



WELCOME MESSAGE FROM



Prof. Luigi Angrisani, *Congress President*



Prof. Scott A. Shikora, *IFSO President*

Dear Colleagues and Friends,

It is a great honour and privilege for us to host the XXVI World Congress of the International Federation for the Surgery of Obesity and Metabolic Disorders (IFSO) in Naples, Italy, twenty-three years after the congress held in Genova, chaired by our mentor, founder and Honorary President of IFSO, Prof. Nicola Scopinaro.

The scientific program is very comprehensive and focused on updating, investigating and better understanding the widest array of topics in the field of the growing adiposity based chronic diseases, through postgraduate courses; symposia, expert talks, discussion panels, hands on skill labs, video sessions, free papers and poster presentations, emerging, endoscopic and new technology sessions and much more.

The aim of the Congress is to educate health care professionals from different specialties, on all the bariatric and metabolic surgery topics as well as to unite across country borders in our fight against the adiposity epidemic.

The XXXI Annual Congress of the Italian Society of bariatric and metabolic surgery (SICOB), chaired by Prof. Mario Musella, will take place in conjunction with the XXVI IFSO World Congress, on August 29th and 30th.

Nine Postgraduate Courses will open the Congress on Tuesday August 29th, followed by three full days of sessions, corporate symposia and other activities until Friday September 1st.

I anticipate that the social program will be as exciting as the scientific program, starting from the Welcome Reception until the Farewell Dinner on Friday night that will close the Congress and will leave in all of us lots of unforgettable memories.

No doubt that you will be welcomed with the famous Italian warmth and with the art of hospitality that our city always offers to its guests.

We look forward to a great Congress in a magic atmosphere!

Luigi Angrisani

Congress President



Scott A. Shikora

IFSO President



IFSO EXECUTIVE BOARD

In memory of: Nicola Scopinaro

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DATES & VENUES

POSTGRADUATE COURSE “Meet the top: all you wanted to know about OAGB”

28/29 August 2023

Hotel Royal Continental

Via Partenope, 38 - 80121 Naples, Italy

POSTGRADUATE COURSES

29 August 2023

Hotel Royal Continental

Via Partenope, 38 - 80121 Naples, Italy

HOW TO REACH THE COURSES VENUE

BY PLANE

From Napoli Capodichino airport take the Alibus busline and get off at Piazza Municipio. Continue on foot to via Acton and take bus 154; get off at the stop for Saint Lucia, and the hotel is just a few steps away.

BY TRAIN

From Napoli Centrale railway station, take Metro Line 1 (Garibaldi, just outside the station), going towards Dante, and get off at Toledo. From there, you can take a taxi or enjoy a pleasant walk along Via Toledo and through Piazza del Plebiscito.

BY CAR

From the motorway, drive towards Piazza Municipio/Porto, continue on Via Acton, cross the Tunnel della Vittoria and follow Via Morelli. After 100m turn left into Piazza Vittoria. Turn left to stay in the square and then turn left into via Arcoleo. Just before the entrance to the Tunnel della Vittoria, turn right into via Chiatamone. At number 54, turn right into via Dumas and at the end of the road turn left into the garage of the hotel.

XXVI IFSO WORLD CONGRESS

30 August - 1 September, 2023

Mostra d’Oltremare

Via J.F. Kennedy, 40 - 80125 Naples, Italy

HOW TO REACH THE CONGRESS VENUE

BY PLANE

From all major Italian and European cities. From Capodichino Airport by car about 15 minutes or by using buses to Piazza Municipio (from here buses in the direction of Fuorigrotta) or to Central Station (from here by Metro Line 2, Campi Flegrei station). The direction to the Congress Venue is “Fuorigrotta/Stadio/Mostra d’Oltremare”.

BY TRAIN

From Central Station (High Speed and Eurostar) connection with Metro Line 2 (Campi Flegrei station, p.le Tecchio), or directly to Campi Flegrei FS Station for regional and intercity Roma/Sicilia trains.

BY CAR

Upon arrival in Naples take the Tangenziale and take exit n.10: Fuorigrotta. Follow the signs for Mostra d’Oltremare. The Mostra d’Oltremare has parking spaces for the public with entrances from Viale Kennedy, 54 managed by QuickPark.

CONGRESS VENUE

MOSTRA D'OLTREMARE

Viale Kennedy, 40 - 80125 Napoli (NA)

www.mostradoltremare.it



PAVILION 6

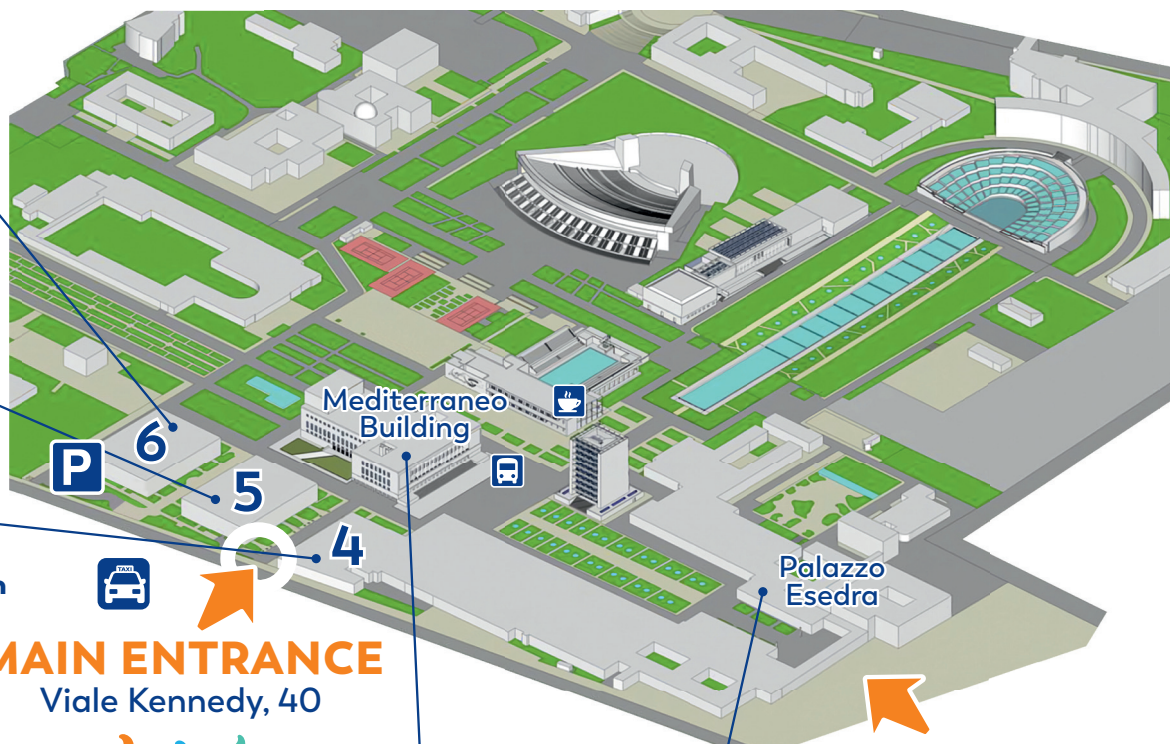
- > Room Amalfi
- > Room Positano
- > Room Sorrento
- > Hospitality Suites
- > Exhibition Area

PAVILION 5

- > Exhibition Area
- > Simulation Center

PAVILION 4

- > Registration
- > Speaker Ready Room
- > Room Capri
- > Room Ischia
- > Room Procida
- > Meeting Rooms



MAIN ENTRANCE

Viale Kennedy, 40



PEDESTRIAN ENTRANCE

Piazzale Tecchio

13 Km - 15 min

8 Km - 10 min

2 Km - 4 min

MEDITERRANEO BUILDING

- > Theatre
- > Room Italia
- > Exhibition Area

PALAZZO ESEDRA

- > Industry Symposia



FLOOR PLANS

MOSTRA D'OLTREMARE

Viale Kennedy, 40 - 80125 Napoli (NA)
www.mostradoltremare.it



ROOMS AND LOCATIONS

Registration & Secretariat	■ Pavilion 4
Speaker Ready Room	■ Pavilion 4
Exhibition Area	■ Pavilion 5 & 6
Catering Area	■ Pavilion 5
Cash Bar	■ Pavilion 4
Luggage Storage	■ Pavilion 4

ROOM

- Amalfi
- Capri
- Esedra
- Ischia
- Italia
- Positano
- Procida
- Sorrento
- Theatre
- Meeting room 1
- Meeting room 2
- Meeting room 3
- Meeting room 4
- Meeting room 5

LOCATION

- Pavilion 6
- Pavilion 4
- Palazzo Esedra
- Pavilion 4
- Mediterraneo Building
- Pavilion 6
- Pavilion 4
- Pavilion 6
- Mediterraneo Building
- Pavilion 4
- Pavilion 4
- Pavilion 4
- Pavilion 4
- Pavilion 4

REGISTRATION FEES



REGISTRATION FEES

AUGUST 30 | SEPTEMBER 1, 2023



MOSTRA D'OLTREMARE

Viale Kennedy, 54 | Naples, Italy

	REGULAR FEE (FROM JUNE 1 TO AUGUST 28, 2023)	ONSITE FEE
Delegate IFSO Member	€ 550,00	€ 650,00
Delegate IFSO Non Member	€ 650,00	€ 750,00
Integrated Health/Physicians/ WOF-WGO-ISPCOP-ESPCOP-SIAARTI- SOBA Member	€ 250,00	€ 300,00
Residents/Students*	€ 250,00	€ 300,00
Welcome reception ticket for Accompanying Person on August 30	€ 60,00	
Farewell Dinner on September 1	€ 120,00	

Registration fees include IT VAT 22%

*Students and Residents Fees: undergraduate, postgraduate, PhD. A certification should be uploaded during the registration process.

For more info about registrations, please visit the official website: www.ifso2023.org

INSTITUTIONAL SESSIONS

Opening Ceremony

Wednesday, 30 August

h. 17:30

Theatre, Mediterraneo Building | Mostra d'Oltremare

Presidential Session

Friday, 1 September

h. 11:00

Theatre, Mediterraneo Building | Mostra d'Oltremare

NETWORKING OPPORTUNITIES

Welcome Reception

Wednesday, 30 August

h. 18:30

Exhibition Area, Pavilion 5 | Mostra d'Oltremare

Farewell Dinner

Friday, 1 September

h. 20:00

Bagno Elena Beach Club | Via Posillipo, 14

This is a ticket event only. To purchase your ticket: www.ifso2023.org

PROGRAM AT A GLANCE



**Please note:
This Program is preliminary and it is subject to changes**

MONDAY, 28 AUGUST

>> UNIVERSITY FEDERICO II MEDICAL SCHOOL, BUILDING 6, MAIN HALL | VIA PANSINI 5, NAPOLI, ITALY

17:00 | 19:30 POSTGRADUATE COURSE
MEET THE TOP: ALL YOU WANTED TO KNOW ABOUT OAGB
Director: M. Musella

TUESDAY, 29 AUGUST

>> HOTEL ROYAL CONTINENTAL































>> MOSTRA D'OLTREMARE

POSTGRADUATE COURSES

MEDITERRANEO BUILDING
ROOM ITALIA

	POSTGRADUATE COURSES									MEDITERRANEO BUILDING ROOM ITALIA
09:00 16:30	MEET THE TOP: ALL YOU WANTED TO KNOW ABOUT OAGB Director: M. Musella Co-Directors: J.M. Chevallier, J. Himpens, R. Ribeiro, N. Sakran	PREVENTION AND MANAGEMENT OF COMPLICATIONS Director: G. Prager Co-Directors: M. Kurian	REVISIONAL SURGERY Director: K. Higa Co-Director: P. Salminen	HERNIA IN THE PATIENTS WITH OBESITY Director: R. Vilallonga Co-Directors: A. Carasquilla, G. Silecchia	THE IMPORTANCE OF MULTIDISCIPLINARY CARE IN OPTIMIZING METABOLIC BARIATRIC SURGERY OUTCOMES Director: M. O' Kane Co-Director: F. Micanti, T. Martinez, Y. Graham	ENDOSCOPIC BARIATRIC SURGERY Director: S. Perretta Co-Director: N. Zundel	GETTING YOUR RESEARCH PUBLISHED: WHAT THE NEW INVESTIGATORS NEEDS TO LEARN Directors: S. Shikora, J. Buchwald, M. De Luca	BARIATRIC SURGERY REGISTRIES Director: W. Brown Co-Directors: R. Liem, G. Navarra	ROBOTIC BARIATRIC SURGERY Director: M. Raffaelli Co-Director: J. Teixeira	XXXI ANNUAL CONGRESS OF THE ITALIAN SOCIETY OF BARIATRIC AND METABOLIC SURGERY (SICOB) Congress President: M. Musella

WEDNESDAY, 30 AUGUST | MOSTRA D'OLTREMARE

	>> PAVILION 6 ROOM AMALFI	>> PAVILION 4 ROOM PROCIDA	>> PAVILION 4 ROOM ISCHIA	>> PAVILION 6 ROOM POSITANO	>> PAVILION 4 ROOM CAPRI	>> PAVILION 6 ROOM SORRENTO	>> MEDITERRANEO BUILDING THEATRE	>> MEDITERRANEO BUILDING ROOM ITALIA	>> PALAZZO ESEDRA ROOM ESEDRA	
09:00 10:30	ORAL ABSTRACT REVISIONAL BARIATRIC SURGERY PART I 	ORAL ABSTRACT METABOLIC SURGERY 	ORAL ABSTRACT REVISIONAL BARIATRIC SURGERY PART II 	THE ROAD TO SATIETY "UNDERSTANDING INTERRELATIONSHIPS OF BIOLOGY AND BEHAVIOUR IN APPETITE AND EATING REGULATION AFTER METABOLIC BARIATRIC SURGERY" Chair: D. Bond Moderators: N. Al Faris, L. Busetto, J. Parrott 	BEST VIDEO CASE REPORTS 2022/2023 Chair: A. Haddad Moderators: J.W. Greve, V. Pilone, A. Ramos, A. Saber 	CLASS I AND II OBESITY: NEW ASMBS/IFSO GUIDELINES Chair: S. Shikora Moderators: A. Nimeri, F. Pasanisi 	ALL OTHER PRIMARY PROCEDURES VS SLEEVE Chair: K. Higa Moderators: M. Gagner, L. Angrisani 			
10:30 11:00	<i>Coffee break</i>									
11:00 12:30	ORAL ABSTRACT ERAMBS/MANAGEMENT AND INNOVATION 	ORAL ABSTRACT ENDOSCOPIC PROCEDURES/SPECIAL INDICATIONS FOR MBS 	ORAL ABSTRACT SLEEVE GASTRECTOMY 	PSYCHOSOCIAL ISSUES AND INTERVENTIONS IN PATIENTS UNDERGOING BARIATRIC SURGERY Chair: B. Rios Moderators: Y. Graham, F. Micanti, S. Savastano 	NEW TECHNOLOGIES - ARTIFICIAL INTELLIGENCE Chair: N. Di Lorenzo Moderators: L. Kow, A.M. Rogers 	HIGH RISK PATIENTS: CIRRHOSIS, CLASS V OBESITY (BMI >60), HEART&RENAL FAILURE: NEW ASMBS/IFSO GUIDELINES Chair: G. Prager Moderators: A. Nimeri, P. Perrone Filardi 	RECURRENT WEIGHT GAIN AFTER RYGB Chair: A. Wittgrove Moderators: M. Anselmino, M. Suter 	XXXI ANNUAL CONGRESS OF THE ITALIAN SOCIETY OF BARIATRIC AND METABOLIC SURGERY (SICOB) Congress President: M. Musella		
12:30 14:00	ORAL ABSTRACT Bipartition/Plication/ Robotic Surgery 	ORAL ABSTRACT NUTRITIONAL MANAGEMENT/NEW DRUGS 	ORAL ABSTRACT SPECIAL INDICATIONS/AMBULA TORY BARIATRIC SURGERY 	IFSO CHAPTERS CHAMPIONSHIP Chair: R. Lutfi Moderators: C. Boza, M. Lakdawala 	TOP PAPERS Chair: S. Shikora Moderators: M. Herrera, M.A. Zappa 	AGE >65 AND ADOLESCENTS: NEW ASMBS/IFSO GUIDELINES Chair: M. De Luca Moderators: E. Aarts, S. Agrawal 	RECURRENT WEIGHT GAIN AFTER OAGB Chair: R. Weiner Moderators: J-M. Chevallier, L. Docimo 			
14:00 15:00	<i>Lunch</i>									
15:00 16:30	VIDEO ABSTRACT I SLEEVE GASTRECTOMY 	ORAL ABSTRACT PERIOPERATIVE MANAGEMENT 	ORAL ABSTRACT GERD AND HIATAL HERNIA/ SWALLABLE AND INTRAGASTRIC BALLOONS 	ISPCOP Session ANESTHESIA FOR BARIATRIC SURGERY, ROBOTS, ERABS AND ALL YOU NEED TO KNOW TO UPDATE YOUR PRACTISE IN 2023 Chair: A.N. Wadhwa Moderators: G. Marinari, G. Servillo 	WGO SESSION OBESITY AND LIVER DISEASE Chairs: G. Macedo, S. Shikora 	WOF SESSION ADDED BENEFITS OF SURGERY AND NEW PHARMACOTHERAPY IN THE TREATMENT OF OBESITY Chair: R. Cohen Moderator: L. Busetto, D. Pournaras 	THE FAVORABLE IMPACT OF MBS ON CANCER Chair: R. Rosenthal Moderator: C. Parmar, Matteo Muto 		14:00 15:00 ETHICON SYMPOSIUM 	
16:30 17:00	<i>Coffee break</i>									
17:30 18:30	MEDITERRANEO BUILDING THEATRE SICOB CLOSING CEREMONY IFSO OPENING CEREMONY									16:30 17:15 CARDINAL HEALTH SYMPOSIUM 
18:30 20:00	EXHIBITION AREA WELCOME RECEPTION									



Please note:
This Program is preliminary and it is subject to changes
































THURSDAY, 31 AUGUST | MOSTRA D'OLTREMARE

	>> PAVILION 6 ROOM AMALFI	>> PAVILION 4 ROOM PROCIDA	>> PAVILION 4 ROOM ISCHIA	>> PAVILION 6 ROOM POSITANO	>> PAVILION 4 ROOM CAPRI	>> PAVILION 6 ROOM SORRENTO	>> MEDITERRANEO BUILDING THEATRE	>> MEDITERRANEO BUILDING ROOM ITALIA	>> PALAZZO ESEDRA ROOM ESEDRA	
08:30 10:00	ORAL ABSTRACT SLEEVE GASTRECTOMY/RYGB/ OAGB 	VIDEO ABSTRACT RYGB/OAGB/BIPARTITION 	VIDEO ABSTRACT SLEEVE GASTROCTOMY/RYGB/OAGB 	WHAT I LEARNED FROM PATIENTS THAT CHANGED OUR PRACTICE Chair: A. Schroeder Moderators: R. Jaiswal, M. Sharma, P. Shah 	PRIMARY ENDOSCOPIC PROCEDURES Chair: C. Stier Moderators: M. Bhandari, G. De Palma 	TOP PAPERS Chair: H. Buchwald Moderators: K. Gawdat, M. Foletto 	GERD AND HIATAL HERNIA - PREOPERATIVE ASSESSMENT Chair: R. Peterli Moderators: D. Birk, P. Iovino 	ORGAN TRANSPLANTATION: LIVER, KIDNEY, HEART, LUNG. NEW ASMBS/IFSO GUIDELINES Chair: M. Kurian Moderators: M. Bueter, R. Troisi 		
10:00 10:30	<i>Coffee break</i>									10:00 10:45 BAXTER SYMPOSIUM 
10:30 12:00	VIDEO ABSTRACT COMPLICATIONS MANAGEMENT/ROBOT IC SURGERY 	ORAL ABSTRACT RYGB/OAGB 	VIDEO ABSTRACT SURGICAL MANAGEMENT OF COMPLICATIONS I 	PHYSICAL ACTIVITIES - THE WHOLE DAY MATTERS Chair: A. Ermolao Moderators: D. Bond, A. Ermolao, G. Iaccarino, R. Marcon 	REVISIONAL ENDOSCOPIC PROCEDURE Chair: M. Bhandari Moderators: M. Galvao Neto, R. Maselli 	IFSO, IFSO EC, SICOB JOINT SESSION Chair: S. Shikora, N. Di Lorenzo, M.A. Zappa, L. Angrisani 	INTRAOPERATIVE DIAGNOSIS AND TECHNIQUE FOR HIATAL HERNIA REPAIR Chair: M. Morino Moderators: A. Aly, G. Camerini 	ABDOMINAL HERNIA: NEW ASMBS/IFSO GUIDELINES Chair: G. Campanelli Moderators: S. Weiner, M. Santangelo 		
12:00 13:30	ADVANCING RIGOR AND INNOVATION OF INTEGRATED HEALTH BARIATRIC SURGERY RESEARCH Chair: S. Leita Faria Moderators: D. Bond, L. Busetto, M. O' Kane, D. Sarwer 	VIDEO ABSTRACT REVISIONAL SURGERY IN WEIGHT REGAIN OR SUBOPTIMAL WEIGHT LOSS 	VIDEO ABSTRACT SURGICAL MANAGEMENT OF COMPLICATIONS II 	SURGICAL MALPRACTICE Chair: S. Al-Sabah Moderators: N. Basso, S. Shikora 	ENDOSCOPIC SLEEVE GASTROPLASTY (ESG): STATE OF THE ART Chair: B. Abu Dayyeh Moderator: I. Boskoski 	BANDED PROCEDURES Chair: J.W. Greve Moderators: M. Fobi, P. Gentileschi, J. Zehetner 	SLEEVE IN GERD: CURRENT OPTIONS Chair: L. Angrisani Moderators: P. Zhang 	TRANSIT BIPARTITION SAGI, SASI, SADI Chair: A. Torres Moderators: T. Mahdy, S. Santoro 		
13:30 14:30	<i>Lunch</i>									13:30 14:30 MEDTRONIC SYMPOSIUM 
14:30 16:00	VIDEO ABSTRACT REVISIONAL SURGERY FOR REFLUX/GERD AND MALNUTRITION 	ORAL ABSTRACT MULTIDISCIPLINARY I 	VIDEO ABSTRACT COMPLICATIONS MANAGEMENT 	T2 DIABETES: SURGERY VS MEDICINE OR SURGERY WITH MEDICINE? Chair: C. Le Roux Moderators: A. Colao, D. Pournaras 	MANAGEMENT OF COMPLICATIONS: ENDOSCOPY INCLUDED Chair: N. Khidir Moderators: M. Khourshed, G. Donatelli 	JOINT ARTHROPLASTY: NEW ASMBS/IFSO GUIDELINES Chair: H. Frydenberg Moderators: K. Loi, J. Pujol 	GERD AND/OR INTRATORACIC MIGRATION/BARRETT AFTER SLEEVE Chair: J. Himpens Moderators: N. Nguyen, A. Genco 	SUBOPTIMAL RESPONSE TO MBS OR RECURRENT WEIGHT GAIN: NEW ASMBS/IFSO GUIDELINES Chair: J. Ponce Moderators: P. Schauer, R. Bellini 		
16:00 16:30	<i>Coffee break</i>									
16:30 18:00	ORAL ABSTRACT POST-OPERATIVE COMPLICATIONS 	VIDEO ABSTRACT GASTRIC BYPASS PROCEDURES INCLUDING RYGB AND OAGB II 	ORAL ABSTRACT GASTRIC BYPASS PROCEDURES INCLUDING RYGB AND OAGB 	JEOPARDY Chair: O. Hamed Judges: C. Boza, M. Lakdawala, M. Kurian, H. Al Momani, R. Palma 	SPECIAL CASES REPORTS Chair: CC Wang Moderators: W.J. Lee, J. Liu 	IFSO EC SESSION EVIDENCE BASED MEDICINE - TOP EUROPEAN BARIATRIC AND METABOLIC SURGERY SCIENCE Chairs: J.M. Chevallier, N. Di Lorenzo 	RECURRENT WEIGHT GAIN AFTER SLEEVE Chair: L. Kow Moderators: A. Ramos, L. Piazza 	COMORBIDITIES AND MORTALITY IMPROVEMENT: NEW ASMBS/IFSO GUIDELINES Chair: C. Marchesini Moderators: A. Aminian, G. Navarra 		

				
INVITED PRESENTATIONS	ORAL ABSTRACTS	VIDEO ABSTRACTS	DEBATES	SYMPOSIA

Please note:
This Program is preliminary and it is subject to changes

FRIDAY, 1 SEPTEMBER | MOSTRA D'OLTREMARE

	>> PAVILION 6 ROOM AMALFI	>> PAVILION 4 ROOM PROCIDA	>> PAVILION 4 ROOM ISCHIA	>> PAVILION 6 ROOM POSITANO	>> PAVILION 4 ROOM CAPRI	>> PAVILION 6 ROOM SORRENTO	>> MEDITERRANEO BUILDING THEATRE	>> MEDITERRANEO BUILDING ROOM ITALIA	>> PAVILION 4 MEETING ROOMS 2-3-4-5	>> PALAZZO ESEDRA ROOM ESEDRA
09:00 10:30	ORAL ABSTRACT METABOLIC SURGERY/GERD AND HIATAL HERNIA 	ORAL ABSTRACT NUTRITION, EATING BEHAVIOURS BEFORE AND AFTER BARIATRIC SURGERY 	ORAL ABSTRACT MANAGEMENT OF WEIGHT GAIN AND SUBOPTIMAL WEIGHT LOSS AFTER BMS 	BARIALINK SESSION Chair: B. Dillemans Moderators: M. Adamo, F. Viegas 	AMBULATORY MBS Chair: C. Boza Moderators: M. Basha, V. Borrelli 	NEW BARIATRIC AND METABOLIC INTERVENTIONS Chair: N. Zundel Moderators: A. Michel, R. Maselli 	IFSO CONSENSUS CONFERENCE 2023: DEFINITIONS AND CLINICAL PRACTICE GUIDELINES Chairs: L. Kow, S. Shikora, G. Prager 	GASTRIC BYPASS vs SLEEVE GASTRECTOMY FOR TYPE 2 DIABETES: WHERE DO WE STAND IN 2023 Chair: F. Rubino Moderators: V. Bruni, R. Cohen 		
10:30 11:00	<i>Coffee break</i>									
11:00 13:00	MEDITERRANEO BUILDING THEATRE PRESIDENTIAL SESSION Scopinaro Lecture Mason Lecture Presidential Address Awards Ceremony									
13:00 14:00	Lunch									13:00 14:00 BLUESAIL SYMPOSIUM 
14:00 15:30	ORAL ABSTRACT MULTIDISCIPLINARY II 		VIDEO ABSTRACT ROBOTIC SURGERY/PROSTHE TIC VERTICAL GASTROPLASTY/BI PARTICION 	IFSO MENAC SESSION: DEBATES AND CONTROVERSIES Chair: K. Gawdat PART 1 Moderators: A. Haddad, S. Taha, K. Mirza Gari PART 2 Moderators: B. Safadi, H. Fawal, R. Lutfi 	VIDEO ABSTRACT SURGICAL MANAGEMENT OF COMPLICATIONS 	IFSO LAC SESSION SOCIAL MEDIA AND DIGITAL TRANSFORMATION Chair: L. Poggi Moderators: P. Martinez Duartez, P. Salminen 	ROBOTIC SURGERY PROS AND CONS Chair: M. Lakdawala Moderators: L. Angrisani, R. Pullat 	DEBATE SESSION ADJUSTABLE GASTRIC BANDING VS PROSTHETIC VERTICAL GASTROPLASTY (BARICLIP) Chair: G.B. Cadiere Moderator: J. Dargent 	15:00 17:00 BRAZILIAN VIDEOS SESSIONS Chair: C. Marchesini 	
15:30 17:00	VIDEO ABSTRACT COMPLICATIONS MANAGEMENT/SUR GICAL MANAGEMENT OF COMPLICATIONS II 	ORAL ABSTRACT MULTIDISCIPLINA RY - INTEGRATED HEALTH 	ORAL ABSTRACT SCIENCE, REGISTRIES - STATISTICS AND METHODOLOGIES 	IFSO APC SESSION THE NEW ASMBS/IFSO GUIDELINES 2022: IS IT NECESSARY TO UPDATE IT FOR ASIAN PATIENTS? Chair: Ce Wang TOPIC 1 Moderators: L. Kow TOPIC 2 Moderators: K. Kasama, K. Loi 	YOUNG IFSO Chair: W. Yang Moderators: S. Chiappetta, M. Felsenreich, H.E. Taskin 	IFSO NAC SESSION UP-TO DATE ON THE LATEST IN NORTH AMERICA Chair: J. Ponce Moderators: P. Garneau, S. Mattar 	RYGB VS OAGB Chair: W. Bukhari Moderators: P. Schauer, N. Sakran 	VIDEO SESSION SURGICAL MANAGEMENT OF LONG-TERM COMPLICATIONS/REVISIONAL 		
17:00 18:30	ORAL ABSTRACT LONG-TERM RESULTS (> 10 YEARS) 	VIDEO ABSTRACT SPECIAL INDICATIONS 	ORAL ABSTRACT SCIENCE, REGISTRIES - BASIC SCIENCE AND RESEARCH IN BARIATRIC SURGERY 	ORAL ABSTRACT COMPLICATIONS MANAGEMENT /POST- OPERATIVE COMPLICATIONS 	ORAL ABSTRACT DUODENAL SWITCH PROCEDURES, INCLUDING SADI-S 	VIDEO ABSTRACT REVISIONAL BARIATRIC SURGERY FOR REFLUX/GERD 				
20:00 23:00	FAREWELL DINNER									



Please note:

This Program is preliminary and it is subject to changes

ORAL ABSTRACTS

O-1

10 YEARS OF THE ONE ANASTOMOSIS GASTRIC BYPASS: A SINGLE CENTRE EXPERIENCE

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Introduction

The One anastomosis gastric bypass (OAGB) still remains one of the most popular bariatric operations worldwide. The primary aim of this study was to identify short and long term outcomes from 10 years of performing OAGB at a single high volume centre in the UK.

Methods

A prospectively maintained database was used to collect data regarding demographic variables as well as patient outcomes. All patients had passed the two year point post operatively at the time of the study. Patient data was collected from 2012 to 2020 with follow up extending to 2022. Data was collected and collated on an excel spreadsheet.

Results

756 patient post OAGB were identified between 2012 and 2020 (M=230, F=526). Follow up was to 2022 of this cohort. 422 had a 150cm limb length OAGB and 318 had a 200cm limb. There was a significant difference in Charlson comorbidity index pre and post op ($p=0.013$). Bile reflux rates were 9.29% (71), revisional surgery 7.28% (55), no post-operative leaks were reported, 1.2% (9) had internal hernias and 0.53% (4) had 30 day return to theatre. 1.05% (8) had protein malnutrition and 3.57% (27) had 30 day readmission. The average operative time was 94.5 minutes (+26). 0.26% (2) required ITU stay within the index admission. No reported 30 day or 90 day mortalities. Weight loss outcomes/ trajectories were also calculated for the cohort and compared.

Conclusion

With 10 years of experience of the OAGB, it remains a safe bariatric operation, with low complication rates.

Table 1. Outcomes from OAGB.

	Outcome	Percentage
30 day mortality	0	0.00
30 day major complications (CD=>3)	19	2.51
90 day major complications	31	3.70
90 day mortality	0.00	0
Revisional surgery	55	7.28
Bile reflux	71	9.39
Malnutrition	8	1.05
IDA	21	2.78
Internal hernia	9	1.2
ITU stay	2	0.26
Leak	0	0
Return to theatre	4	0.53
Readmission	27	3.57
% excess weight loss	70.65% (+/-67)	
%total body weight loss	32.1% (+/-5.6)	

O-2

10-YEAR OUTCOMES AFTER ROUX-EN-Y GASTRIC BYPASS: WEIGHT DEVELOPMENT, OBESITY-RELATED DISEASES AND COMPLICATIONS

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Background

Roux-en-Y gastric bypass (RYGB) is a widely used bariatric metabolic surgical procedure. Main indications for surgery includes weight loss and improvements in obesity-related diseases.

Objectives

To observe long-term outcomes after RYGB in the context of weight development, remission of obesity-related diseases, re-admissions and surgical complications.

Methods

Patients operated with RYGB during 2004-2008 were included. Data was collected prospectively before and at one, two, five and 10 years after RYGB. Indications for surgery were according to the National Institute of Health guidelines (1991). All but one patient were operated laparoscopically. Early complications (within 30 days postoperatively) were defined as Clavien Dindo (CD) grade \geq IIIb. The International Diabetes Federation recommendations were used to define metabolic syndrome.

Results

A total of 582 patients were included. There was no 30-day perioperative mortality. In total 35 patients (6%) died during follow-up. Of the 547 patients, 310 patients (56.7%) attended 10-year follow-up. Females constituted 73.2% at baseline and 76.5% at follow-up. Mean weight and BMI at baseline and 10-year follow-up were 135.3 (22.4) kg and 45.8 (5.5) kg/m² vs. 103.7 (25.0) kg, 35.6 (6.8) kg/m², respectively ($p < 0.001$). Total weight loss and excess weight loss at 10 years were 23.4 (12.3) % and 52.4 (27.7) %, respectively. Early surgical complications were seen in 26/582 patients (4.5%). Common late complications (>30 days postoperatively) included gall stone related disease in 29/310 (9.4%), ileus in 23/310 (7.4%) and ulcer in 11/310 (3.5%) patients. The prevalence of metabolic obesity-related diseases before and 10 years after RYGB was diabetes; 178/582 (30.6%) vs 56/294 (19.0%), hypertension; 313/574 (54.5%) vs. 107/303 (35.3%), and dyslipidemia; 380/582 (65.3%) vs. 158/297 (53.2%), respectively ($p < 0.001$). Metabolic syndrome was seen in 195/346 (56.4%) at baseline and in 48/242 (19.8%) at 10-year follow-up ($p < 0.001$).

Conclusion

We found significant and sustained weight loss and improvements in metabolic obesity-related diseases 10 years after RYGB. The rate of common late complications was high.

O-3

15-YEAR RESULTS OF LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS

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Background

Roux-en-Y gastric bypass (RYGB) is one of the most common procedures to treat patients with severe obesity and is still considered as the “gold standard” by many. It has been in use for over 50 years, yet only few authors have reported on long-term results (>10 years). The aim of this paper is to report 15-year results and beyond in a large group of patients.

Patients and methods

All patients consecutively operated in two referral bariatric centers with one common surgeon were included. Data was gathered during in-person visits for most patients, but also using electronic medical records, phone calls to the patient and/or general practitioner. Results are reported as body mass index (BMI), % total body weight loss (%BWL) and mmol/L as appropriate.

Results

A total of 951 patients (738 female (77,6%)) were operated between 1.1999 and 12.2007. Mean preoperative age and BMI were 40,4±10,7 years and 44,7±6,8 kg/m² respectively. The nadir BMI was after 2 years (29,8±6,8) and corresponds to a %BWL of 35±11,2. The follow-up rates after 5, 10, 15 and 20 years was 96,1, 86, 60 and 44,5% respectively. 50 (5,2%) patients died during the first 15 post-operative years. After 5, 10, 15 and 20 years, the mean BMI was 31,2±7,1, 32,6±7,5, 32,8±7,9 and 34,2±10,9 kg/m², and the %BWL was 31,7±12,6, 28,4±14,5, 27,9±15,8 and 26,6±18,9. This was associated with long-term metabolic improvement. The table shows the mean±SD values for glucose, total-, HDL- and LDL-cholesterol, triglycerides and urates over time.

	Pre-op	5 years	10.years	15 years
Glucose	6,1±1,9	4,2±1,9	5,1±1,1	5,4±1,2
Total cholesterol	5,4±1,0	4,8±0,9	4,9±0,9	4,9±0,8
HDL-C	1,3±0,4	1,7±0,5	1,7±0,5	1,8±0,5
LDL-C	3,2±0,9	2,5±0,7	2,6±0,8	2,9±0,7
Triglycerides	2,0±1,3	1,2±0,7	1,2±0,6	1,2±0,5
Urates	341±99	298±81	302±85	311±89

Conclusions

RYGB provides very acceptable long-term weight loss which is associated with long-term and sustained improvement of metabolic comorbidities, despite some slight worsening over time, part of which may probably also be attributed to aging. RYGB is a valuable and efficient bariatric procedure.

O-4
3DCT CONDUIT AND OESOPHAGEAL METRICS, A VALUABLE METHOD TO DIAGNOSE POST SLEEVE GASTRECTOMY ANGULARIS STENOSIS

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Background

Reflux post laparoscopic sleeve gastrectomy (LSG) is multifactorial. Identifying the aetiology of refractory reflux is key to guiding management. Angularis stenosis is a recognised but poorly defined potential cause of post-LSG symptoms. While endoscopy is helpful in diagnosis and treatment of strictures, is often subjective, and functional stenosis can be underdiagnosed. 3-Dimensional CT (3DCT) scans can be effective in delineating gastric anatomy and complications. However, no uniform methods exist for reporting these scans nor defining normality/abnormality.

Purpose

Establish measurements that constitute and are associated with clinical stenosis on 3DCT scan as an approach to standardise post LSG anatomy assessment.

Methods

Retrospective study of patients undergone 3DCT following LSG for weight regain and/or reflux symptoms. Clinical & demographic data including age, gender, BMI, Symptomatology invoking scan and investigations including endoscopy, Manometry & pH monitoring were collected. 3DCT measurements including angularis angle (AA), surface area (ASA), proximal (PMSA), distal maximal surface area (DMSA), Gastric conduit Length (GCL) & Oesophageal diameter (OD) were recorded. Patients grouped according to endoscopy findings and their 3DCT indications. R software used for statistical analysis.

Results

64 patients (20% males) identified. Preop BMI and at 3DCT were 45.57 (± 8.3), 36.3 (± 8.7), surgery to scan period 6.2 (± 6.9) years. 71.8% had reflux and/or regurgitation/ dysphagia, the rest had weight regain alone as indication for 3DCT. Gastric volume, (ASA) (10.1 ± 4.2 cm²), and (DMSA) (21.2 ± 4.1 cm²) were less in those with endoscopic findings of stenosis/reflux ($p=.002$) and ($p=.007$) respectively. (AA) and (PMSA) of conduit were lower in endoscopic findings of stenosis/reflux group, and in patients presenting with reflux/regurgitation/dysphagia respectively but lacked statistical association. The latter group however had lower BMI on multivariate analysis. Furthermore, (OD) and (GCL) were higher in those with lower (AA) ($p=.008$) and ($p=.01$). Duration between LSG and 3DCT strongly correlated with higher BMI at 3DCT, longer conduit length and higher PMSA.

Conclusion

Correlation exists between clinical stenosis and 3DCT measurements. 3DCT can help predict and guide further treatment of post LSG refractory reflux and regurgitation.

O-5

6 YEAR RETROSPECTIVE STUDY: COMPARISON OF BARIATRIC SURGERY OUTCOMES SINGLE ANASTOMOSIS DUODENO-ILEOSTOMY (SADI) VS SLEEVE DUO-JEJUNOSTOMY BYPASS (SDJB) VS SLEEVE GASTRECTOMY (SG) ALONE

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Introduction

The SADI was introduced in the hope to reduce complication rates of the traditional Roux-en-Y. Bariatric surgery is always striving to reduce complications whilst maintaining weight loss. The SADI involves a sleeve gastrectomy and a duodeno-ileostomy with a common channel of 250-300cm. Optimal length for the common channel (CC) and biliary-pancreatic (BP) limb remains contested. The SDJB is similar to the SADI other than the BP limb is shortened to 150cm. Our aim was to confirm a reduction in malabsorptive complications and maintain weight loss over time by shortening BP limb length.

Methods

A 6-year retrospective cohort study was performed at a single surgeon institute. 78 SADI, 57 SDJB patients and a BMI matched cohort of 135 SG patients were identified. Inclusions: BMI 35-70, operation December 2015 – December 2021. Exclusions: revisional ring procedures. Data was collected pre and post operative. Outcomes were EWL% at 6 years, Biochemistry, stool habit and complications.

Results

Shortening limb length was not significantly different to SADI regarding EWL% at 6 years ($p=0.137$). SADI and SDJB were superior to SG alone at 3 and 4 years ($p<0.001$ and $p=0.033$). SDJB was similar to SADI at remission of T2DM with both groups significantly reducing HBA1C compared to SG group ($p=0.006$, $p=0.009$ respectively). All groups significantly reduced use of CPAP, Statins and antihypertensives post operative. SDJB group significantly improved post operative daily stool count and consistency compared to SADI group ($p=0.03$ and $p=0.001$). SDJB complication rate was comparative to SADI ($p=0.189$). SDJB had significantly improved levels of selenium, corrected calcium, cholesterol and B12 stores compared to SADI ($p=0.041$, $p=0.001$, $p<0.001$, $p<0.001$).

Conclusion

Shortening limb length (SDJB) proved equal to SADI regarding EWL% over 6 years. With SADI and SDJB groups having significantly higher long term EWL% compared to SG alone. SDJB was significantly better than SADI at reducing bowel motions per day and improving stool consistency. SDJB had significantly improved biochemical markers of malabsorption compared to SADI. Overall, SDJB has similar disease resolution and weight loss to SADI and significantly improved bowel habits. Thus, shortening BPL reduced malabsorptive complications whilst maintaining long term EWL%.

O-6
A 3 YEAR RETROSPECTIVE STUDY POST RYGB IN PATIENTS WITH WEIGHT GAIN AFTER SLEEVE GASTRECTOMY – A COMPARISON OF WEIGHT LOSS WITH NUTRITIONAL PARAMETERS

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Background

Weight regain/failure can occur in upto 60% of patients with sleeve in long term. Insufficient weightloss and weight regain are the most common reasons. There are many surgeries which can be done for weight regain after sleeve gastrectomy. Here we retrospectively analyse the outcomes of revision of sleeve gastrectomy to Laparoscopic RYGB at our center.

Methods

46 patients underwent revision of sleeve to RYGB between 2016 to 2019. Patients were followed up for 3 years and outcomes were measured in terms of %Excess weight loss, Hemoglobin, Serum iron and albumin levels at end of 3 years. Total bowel length was measured and the common channel was kept constant at 450 cms and alimentary limb was also kept constant at 80 cms.

Results

Mean Pre-operative BMI was 43.2 ± 14 kg/m². Mean post operative BMI at 1 year, 2 year and 3 year was 30.3 ± 4.19 , 32.6 ± 4.72 and 34 ± 5.8 kg/m². The mean % EWL at the end of 1 year, 2 years and 3 years was 71.5 ± 17.2 , 68.2 ± 18.1 and 60.8 ± 19.8 . Mean Serum Albumin level at pre operatively was 3.9 ± 0.46 and at 1 year, 2 year and 3 years was 3.7 ± 0.55 , 3.6 ± 0.62 and 3.3 ± 0.92 . Mean S. Iron preoperative was 63.97 ± 49.46 and at 1 year, 2year and 3 years was 73.85 ± 41.54 , 69.54 ± 44.57 and 67.66 ± 42.45 respectively. Mean Pre-operative Hb was 11.3 ± 1.24 and at 1 year, 2 year and 3 year was 12.3 ± 1.29 , 11.9 ± 1.22 and 11.2 ± 1.02 respectively. 1 patient had remnant stomach leak, 1 patient developed GJ stricture, 3 patients had diarrhea which was medically managed. There was no mortality.

Conclusion

Conversion of Sleeve to Roux-en-y gastric bypass for weight gain gives good weight loss results with acceptable nutritional complications.

O-7

A BLINDED RANDOMIZED CONTROL TRIAL OF THE EFFECT OF APREPITANT FOR NAUSEA AND VOMITING FOLLOWING SLEEVE GASTRECTOMY

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Background

Sleeve gastrectomy is associated with postoperative nausea and vomiting (PONV), that affects patient comfort, prolongs hospital stay, can induce complications and increases costs. In this study, we contrasted the impact of Aprepitant against standard of care plus placebo, on the incidence of PONV after sleeve gastrectomy.

Methods

A total of 400 consecutive patients undergoing sleeve gastrectomy were enrolled, and randomized in a simple fashion (1:1). The case group had a prophylactic “standard of care” scheme for PONV (Dexamethasone 8 mg, Ondansetron 8 mg, and Metoclopramide 10 mg), plus oral Aprepitant one hour before surgery. The control group only received the “standard of care” drugs plus oral placebo. A comparative demographic, anthropometric and peri-operative analysis was performed. PONV was evaluated with the Rhodes scale at 0, 6, 12, and 24 hours.

Results

Groups included 201 patients with Aprepitant, and 199 with placebo. The median age was 38 years, with mean BMI of 42.1 ± 8 kg/m². Female sex comprised 94% of cases. The number of patients with nausea was lower in the Aprepitant group among the four evaluations: early postoperative, 69 (34.3%) vs 103 (51.7%) p=0.001; at 6 hours, 67 (33.3%) vs 131 (65.8%) p=0.001; at 12 hours, 41 (20.4%) vs 115 (57.8%) p=0.001; at 24 hours, 22 (10.9%) vs 67 (33.7%) p=0.001. Likewise, the number of patients who presented vomiting was lower in the Aprepitant group: immediate postoperative, 3 (1.5%) vs 5 (2.5%) p=0.02; at 6 hours, 6 (3%) vs 18 (9%) p=0.02; at 12 hours, 2 (1%) vs 17 (8.5%) p=0.006; at 24 hours, 1 (0.5%) vs 6 (3%) p=0.04. Aprepitant group also required less extra medication for PONV compared to placebo group: early postoperative, 61 (30.3%) vs 86 (43.2%) p=0.008; at 6 hours, 7 (3.5%) vs 34 (17%) p=0.001; at 12 hours, 6 (3%) vs 31 (15.6%) p=0.001; at 24 hours, 5 (2.5%) vs 11 (5.5%) p=0.01.

Conclusions

The preoperative use of Aprepitant improves significantly PONV in patients submitted to sleeve gastrectomy when compared to standard of care. The impact is observed since the early postoperative period, and continues up to 24 hours following surgery.

O-8
A CLOSER LOOK AT THE TREND OF BIOMARKERS OF LIVER STATUS AFTER DIFFERENT TYPES OF BARIATRIC SURGERIES

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Background

Bariatric-metabolic surgery which refers to several surgical procedures on the gastrointestinal tract is an innovative treatment approach for severe obesity with the aim of improving comorbidities including some liver diseases by resolving hepatic steatosis, inflammation, and fibrosis.

Objectives

Report and update on the controversial issue of liver function status following Roux-en-Y gastric bypass (RYGB), Sleeve gastrectomy (SG), and One-Anastomosis Gastric Bypass (OAGB).

Methods

This retrospective cohort project was conducted on adult bariatric candidates with no previous history of alcohol intake or other causes of hepatic disorders. The trend of liver function test and fibrosis biomarkers (AST: ALT ratio, HIS, aspartate aminotransferase to platelet ratio index (APRI), NAFLD fibrosis, Fibrosis-4 Index, and BARD score) were analyzed and assessed from pre-operative to 3, 6, 12, 24 months and 4-year post-operative follow-up by applying generalized estimating equations method (GEE).

Results

From the total of 7733 participants enrolled, 28.51% of patients underwent SG, 52.45% underwent OAGB, and 19.04% underwent RYGB with an average age of 37-40 years. According to the GEE model, no significant difference was observed between the trends of indices regarding Albumin, alanine aminotransferase (ALT), APRI, NAFLD fibrosis score, and BARD among three surgery techniques. Besides, there was no considerable difference between RYGB and OAGB in terms of the trend of aspartate aminotransferase (AST); meanwhile, a significant difference between OAGB and SG was found. The trend of the AST: ALT ratio differed in all three surgeries.

Conclusion

Based on these findings, declined trend of liver function tests and liver fibrosis parameters post-operative could be a representation of recovery of liver-related morbidity after bariatric-metabolic surgery. Besides, all the trends of liver fibrosis parameters except the AST: ALT ratio were similar among the three procedures.

O-9

A DUTCH SURVEY ON MEDICATION ADJUSTMENTS AFTER BARIATRIC SURGERY: EXPERIENCES OF BARIATRIC SURGEONS, INTERNISTS, PHARMACISTS AND GENERAL PRACTITIONERS

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Background

As bariatric surgery can alter the pharmacokinetics of drugs, patients with bariatric surgery may require alternative dosing advice and monitoring. To improve the pharmacotherapy of these patients after surgery, it is important to understand the beliefs, attitude, knowledge, and concerns of healthcare professionals who treat these patients.

Objectives

The aim of this research was to determine the beliefs, attitude, knowledge, and potential concerns of Dutch health professionals who treat patients with bariatric surgery.

Methods

A national survey by means of an online questionnaire in the Netherlands was sent to bariatric surgeons, internists, pharmacists and general practitioners (GP). Participants were surveyed about their beliefs, concerns, education and monitoring actions regarding pharmacotherapy in patients with bariatric surgery, as well as the exchange of information regarding bariatric surgery with other healthcare professionals.

Results

Out of 229 returned surveys, 222 were included. Of these, 185 surveys were completed. Virtually all respondents (98%) expected bariatric surgery to influence the effect of medication. Of the participants, 29% often or always worried about the medication adjustments that a patient with bariatric surgery needs. Two-third of the respondents felt competent to prescribe or to provide advice regarding medication in patients with bariatric surgery. Most of the respondents (95%) believed that other healthcare professionals should be aware of the contraindication 'bariatric surgery'. Of the respondents, 37% indicated that they were not aware of the medication advice related to bariatric surgery that has already been incorporated in the electronic health record systems. Almost half of the respondents (48%) indicated that they documented the changes in drug effects that the patients experienced after bariatric surgery. Most participants reported these ought to be registered in the pharmacovigilance database or national registry.

Conclusion

Most healthcare professionals in the fields of bariatric surgery, internal medicine, pharmacy and GP practices believe that patients will get better pharmacotherapy, when their healthcare professionals take their bariatric surgery into account. However, not all prescribers think they are competent to act adequately. To improve this, information on changed drugs effects after bariatric surgery should be more widely shared among healthcare professionals via resources that are easily accessible.

O-10

A FIELD STUDY OF POSTURAL ERGONOMICS IN BARIATRIC SURGERY

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Background

Ergonomics in laparoscopy emerged as a topic of interest due to the various symptoms and discomfort reported by surgeons as a result of awkward positions held for long periods of time. Bariatric surgery further aggravates these as a result of increase in the apparent height of operating due to the obese abdomen and also due to the use of longer instruments than conventional laparoscopic surgery. Though there is extensive research done in the field of ergonomics in laparoscopic surgery, the data available specific to bariatric surgery is surprisingly limited. This study is an attempt to throw some light on the postural aspects of ergonomics in bariatric surgery.

Objectives

To assess postural ergonomics of bariatric surgeons using REBA score

Methods

A prospective study was conducted in Victoria Hospital in Bangalore between the months of October 2022 and March 2023 which included people with obesity undergoing bariatric surgery. Demographic and anthropometric details including BMI were collected. After obtaining consent, the bariatric surgeons performing the procedures were observed during surgery. Awkward body postures held for more than 30s or body postures which were repeatedly being used were photographed from lateral and posterior aspects using a high definition camera. Angles relevant for calculating REBA scores, such as neck flexion/extension, trunk flexion/extension, upper arm, lower arm and wrist flexion/extension were measured. REBA score was calculated. The data obtained was tabulated. Statistical analysis was done using SPSS 23 software. Data was expressed in terms of descriptive statistics. The REBA scores obtained were correlated with the BMI of the patients using Pearson's correlation coefficient.

Results

The BMI of the patients ranged from 30.3-60kg/m² (43.4±8.55 kg/m²). The REBA score ranged from 3-6 (4.6±1.08). A low risk level was noted in 3(20%) surgeries whereas a medium risk level was noted in 12(80%) surgeries. There was no statistically significant correlation noted between the BMI of the patient and the corresponding REBA scores.

Conclusion

Bariatric surgery poses a great ergonomic challenge to the surgeons, necessitating further studies in the field to achieve better ergonomical safety.

O-11

A MID-TERM FOLLOW-UP REPORT FOR SINGLE-ANASTOMOSIS SLEEVE JEJUNAL (SASJ) BYPASS IN THE MIDDLE EASTERN POPULATION

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Background

Single anastomosis sleeve ileal bypass(SASI) is a combined bariatric technique, and studies have shown its promising outcomes on weight loss and remission of diabetes mellitus (T2DM).Single anastomosis sleeve jejunal bypass (SASJ) has a shorter limb. Therefore, it seems to have a lower risk of nutrient deficiency.Furthermore,this technique is relatively new and unfamiliar to most surgeons. Little is known about the efficacy and safety of SASJ.

Methods

The 18-month follow-up data of 43 patients with severe obesity who underwent SASJ from January 2016 to April 2019 was collected. The primary outcome measures were demographic data,weight change variables according to ideal body mass index (BMI) of 25 kg/m² at 6, 12, and 18 months follow-up, laboratory assessments (including serum levels of hemoglobin, vitamin D, albumin, ferritin, vitamin B12, folic acid, and zinc) at 12 and 18 months, remission of obesity-associated medical problems and other potential bariatric complications 18 months after the surgery.

Results

The baseline weight and BMI of the patients was 118±13.2 kg and 45±4.6 kg/m², respectively, which decreased to 75±9 kg ($p<0.001$) and 28.5±4.5 kg/m² ($p<0.001$), respectively 18 months after surgery. After 18 months, patients lost 36.3±7 kg of their weight and 72±15% of their excess weight (%EWL). BMI and %EWL has a steep decreasing slope during the first year. However, the trend plateaued.T2DM, HTN, and HLP remission rates at 18 months of follow-up were 100%, 85%, and 69%, respectively. Patients neither faced deficiency in significant markers for nutrition state nor represented major bariatric surgery complications; however, hair loss, hemorrhoid, and transient nausea were reported in 12 (27.9%), 1 (2.3%), and 2 (4.6%) of the patients, respectively.

Discussion

Our %EWL and remission rates in obesity-associated medical problems were near to other investigations with a little discrepancy.An essential aspect of weight loss after SASJ is that the trend will dramatically decrease after the first postoperative year; there might be a risk of not reaching the normal BMI range for SASJ candidates,making this procedure less effective for patients with BMI>50 kg/m².

Conclusion

SASJ bariatric surgery is accompanied by promising outcomes in excessive weight reduction and improvement of comorbidities and is associated with minor postoperative complications and nutrient deficiencies.

O-12
A NARRATIVE REVIEW OF DIAGNOSIS AND MANAGEMENT OF INTRACTABLE GASTRO-OESOPHAGEAL REFLUX AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY

Michael Talbot ⁽¹⁾ - Daniel Chan ⁽²⁾ - Kerry Chen ⁽³⁾ - Ben Indja ⁽³⁾

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After laparoscopic sleeve gastrectomy (LSG) post-operative gastro-oesophageal reflux (GORD) is one of the most significant adverse events. It is a “contested space” with unclear definitions, diagnostic criteria and management algorithms.

Methods

A literature search was conducted on the Medline and PubMed databases for articles published from 2000 to 2023.

Results

The diagnosis of reflux rests upon patient symptoms, response to medical therapy and investigations. The clinical and questionnaire diagnosis of reflux has a sensitivity of 62% and specificity of 67%, whereas a trial of acid suppression has a sensitivity of 71% and specificity of 44%. Anatomic assessment of the post-LSG stomach can be performed by endoscopy, barium contrast swallow, CT scan and manometry. Endoscopy has high sensitivity for reflux diagnosis in the presence of erosive oesophagitis > LA Grade B. Intra-observer variability for hiatal hernia and morphology exists. Barium contrast swallow has a 30% sensitivity for diagnosing LSG stenosis and is significantly less accurate than CT scanning which has the highest sensitivity and specificity for diagnosis of intra-thoracic staple line migration, hiatal hernia, sleeve dilatation and sleeve stenosis.

Functional assessment

High Resolution Manometry (HRM) studies post-LSG are heterogeneous however impairments in peristalsis, oesophageal transit and increased proximal gastric pressure appear prevalent. Acid and Acid/Impedance normal values have not been established in post-LSG patients, and increased oesophageal acidification can occur without symptoms, and factors associated with symptomatic reflux include an Acid Exposure Time (AET) > 9%, supine acidification, and volume reflux.

Treatment

Endoscopic therapies appear to offer benefit to some patients but are currently investigational. Surgical therapy for post-LSG reflux has been traditionally that of conversion to Roux-en-y Gastric Bypass (GBP) however absence of objective data pre and post GBP conversion and lack of medium or long-term follow-up data potentially obscures true outcomes. Other revision surgeries include Hiatal Hernia Repair (HHR) with or without adjuvants such as mesh or ligamentum teres reinforcement, One anastomosis gastric bypass (OAGB) and Duodenal Switch. As all surgical therapies show acceptable results, but are prone to selection bias, consideration needs to be given to obtaining objective outcome data in future studies.

O-13

A NOVEL MODIFIED FOUR PORT LAPAROSCOPIC CHOLECYSTECTOMY TECHNIQUE IN PATIENTS WITH OBESITY TO IMPROVE OPERATIVE CHALLENGES AND ABDOMINAL WALL OUTCOMES: A RETROSPECTIVE COHORT COMPARISON STUDY

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Background

Laparoscopic cholecystectomy (LC) is the gold standard management of gallstone disease. A traditional four-port laparoscopic cholecystectomy (TFPLC) is well described and safe in obese populations. However it has its own technical challenges related to the abdominal wall (i.e. access and closure), visualisation and distance to the surgical field. With a rising incidence of obesity, the surgeon's obese patient case load will likely increase. This study describes and assesses a modified four-port laparoscopic cholecystectomy (MFPLC) technique which may circumvent the challenges described above.

Objectives

To assess outcomes related to the abdominal wall (incisional hernia, infection, seroma, haematoma) associated with the MFPLC technique. To assess the safety of the MFPLC technique.

Methods

This retrospective cohort comparison study included all patients who underwent an emergency or elective LC, between 31/12/2019 - 31/12/2021. Inpatient/outpatient documentation was reviewed to establish intra- and post-operative outcomes. Telephone follow up interviews were carried out in January 2023, to establish any missed complications. All postoperative abdominal imaging (irrespective of indication) was reviewed in January 2023 to identify incidental incisional hernias.

Results

77 and 158 patients had a TFPLC or MFPLC respectively. There were no significant demographic differences except mean BMI varied between TFPLC (36.2kg/m²) and MFPLC (25.8kg/m²) groups. Mean operative time was longer in the MFPLC group, 88.5 versus 84.0 minutes (p<0.05). No significant differences in intraoperative and postoperative outcomes relating specifically to LC were noted. Abdominal wall outcomes; a higher rate of seromas (2.6% versus 1.3%, P < 0.05), haematomas (1.9% versus 0.0%, p < 0.05), port site hernias (1.9% versus 1.3%, p<0.05) and port site infection rates (3.8% vs 1.3%), p < 0.05) was observed in the TFPLC versus MFPLC groups, respectively.

Conclusion

This study has demonstrated MFPLC technique safety. MFPLC technique may improve port site related outcomes. Obesity increases the risk of infection, seroma and incisional hernia. Observed port-site outcomes are particularly significant when we consider the higher BMI in the MFPLC group. We discuss the technical benefits of the MFPLC.

O-14

A REVIEW OF 5:2 INTERMITTENT FASTING, ALTERNATE DAY FASTING, AND TIME RESTRICTED FASTING FOR THE MANAGEMENT OF OBESITY

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Background

Intermittent fasting (IF) is a dietary strategy which has shown promising results for weight loss.

Objective

Our objective was to review 3 IF protocols; alternate day fasting (ADF), time restricted fasting (TRF) with a daily 16 hour fast, and 5:2 intermittent fast (5:2 IF) with 5 days of normal eating and 2 days of 0-25% calorie intake. Key outcome markers included assessment of change in weight, blood pressure, fasting glucose and lipid profile.

Methods

The databases PUBMED, EMBase, and Cochrane libraries were searched using the terms “intermittent fasting”, “5:2 diet”, “alternate day fasting”, “alternate day feeding”, “time restricted feeding”, “time restricted fasting”, “overweight”, “obese”. Studies including RCT, single arm, and cohort studies, with overweight (BMI > 25) without additional co-morbidities participants were included for analysis.

Results

27 studies met the inclusion criteria. The following range of weight loss was achieved ($P < 0.05$): TRF: (2.6% - 3.6%), 5:2 IF (5.4% - 6%), and ADF (3.2% - 6.4%). 1 study compared TRF and ADF with (6.4% vs 3.6%) weight loss respectively, ADF reducing fasting glucose and TRF reducing triglyceride (TG) levels. 3 TRF studies showed reduced blood pressure (BP). 1 ADF study showed reduced LDL levels. 3 5:2 IF studies individually showed reduced fasting glucose, insulin and BP.

Conclusion

IF protocols offer a safe and feasible alternative to calorie restriction diets for achieving weight loss and improving markers of cardiometabolic health in overweight individuals. A 3-arm comparative clinical trial is required to see if any one protocol delivers clinically significant superior results.

O-15

A STUDY TO OBSERVE MEASURABLE DIFFERENCES POST BARIATRIC-METABOLIC SURGERY THROUGH BODY ANALYSIS DATA

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Background

The dimensions of body image are body inch measurements, percent weight loss (%WL), percent body fat (PBF), skeletal muscle mass (SMM) are taken in participants by using body impedance analysis (BIA- InBody370S).

Objective

The purpose of this study was to explore and observe measurable differences post bariatric-metabolic surgery through anthropometric (Body inch measurements, BMI) measurements and body analysis (%WL, PBF, SMM) parameters over one year period.

Method

A one group pretest-posttest design was used to study 47 adults (n=47) before and three months, six months, nine months and twelve months after bariatric-metabolic surgery. The overall sample included these surgeries: Roux-en-Y gastric bypass (RYGB; n=37), sleeve gastrectomy (SG; n=6), One-Anastomosis gastric bypass (OAGB; n=5). Three self-report body image measures (BMI, PBF, SMM) and anthropometric measures (waist to hip ratio, WHR) were analyzed using mean. Differences in outcomes over three months, six months, nine months and twelve months were examined for the overall sample. Comparisons within the three surgeries were not made, given the small number of two surgeries SG, OAGB.

Results

Observable difference was seen in mean PBF preoperative was 51.55 and 9.9, 8.5, 7, 3 at 3,6,9,12 months respectively, total loss of PBF was 26.1 % over the period of a year. SMM preoperatively was 31.82, and 8.1%, 3 %, 3%, 0.3 % loss was consecutively at 3,6,9,12 months, it was a total loss of 13.8 % of SMM over the period of a year. Reduction of BMI over a year was 35.5% with 18.3, 9.7, 7.6, 5.5 % reduction in 3,6,9,12 months respectively. There was no significant difference in mean hip circumference. Significant mean difference was seen in SMM in pre to 3 months. And in PBF it was seen for 3 and 6 months.

Conclusions

Study was done to examine body changes in specifically body fat & skeletal muscle & changes over the BMI mass over a period of one year. Changes in BMI and anthropometric measures were clinically significant. Body change outcomes, not just BMI should be measured at bariatric surgery patients' clinical appointments. Initial 3,6 months post-surgery are of importance as drastic changes are observed.

O-16

ABNORMAL PREOPERATIVE ESOPHAGEAL TESTING PREDICTS UNRESOLVED REFLUX AFTER ROUX-EN Y GASTRIC BYPASS

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Background

The incidence of postoperative reflux after bariatric surgery varies considerably from 6.3-67.9%. Since there are no consistent perioperative patient characteristics that predict this outcome, it is difficult to accurately counsel the risk of postoperative reflux.

Objectives

We leverage our institution's comprehensive preoperative esophageal testing to identify predictors of postoperative reflux.

Methods

We performed a retrospective review of adult patients with preoperative reflux symptoms interested in vertical sleeve gastrectomy (VSG) or Roux-en Y gastric bypass (RYGB) from 2015-2021. All patients had pH and high-resolution manometry testing preoperatively. Based on preoperative testing, individual patient factors, and preferences an operation was chosen with shared decision making. If patients had significant preoperative esophagogastric pathology, a RYGB was recommended. The primary outcome was patient-reported reflux symptoms at 1 year. Predictors of postoperative reflux were explored via chi-square test or Fisher's exact test and Kruskal Wallis test, as appropriate.

Results

Two hundred and twenty-seven patients with preoperative reflux symptoms underwent either RYGB or VSG. Of the 98 RYGB patients, 19 (19.3%) had unresolved postoperative reflux. Those with unresolved reflux had higher rates of ineffective esophageal motility (IEM) (31.6% vs. 8.9%, $p=.01$) and trended towards a higher median DeMeester score (22 vs. 13, $p=.07$). Of the 129 VSG patients, 60 (46.5%) had unresolved postoperative reflux. VSG patients with unresolved reflux had similar median DeMeester scores and rates of IEM ($p=ns$) but had more concomitant preoperative dysphagia symptoms (13.3% vs. 2.9%, $p=.04$) and higher preoperative PPI use (56.7% vs. 39.1%, $p=.05$).

Conclusion

Preoperative IEM and abnormal DeMeester scores predicted higher rates of unresolved reflux after RYGB. This indicates that impaired esophageal acid clearance may be a contributing factor. In VSG patients, higher rates of preoperative dysphagia symptoms and PPI use predicted unresolved reflux though lack of correlation to objective pH testing speaks to the subjective nature of patient symptoms and the challenges in predicting postoperative symptomatology.

O-17

ACHIEVING LEARNING CURVE IN OAGB, A CUSUM ANALYSIS

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Background

Bariatric surgery is currently considered the most effective and durable treatment option for morbid obesity. Laparoscopic OAGB is a technique that is gaining more and more approval among surgeons worldwide. Actually, no data has been provided in literature about the learning curve for OAGB.

Objectives

Evaluate the learning curve of OAGB in two SICOB obesity center.

Methods

We retrospectively analyze the prospective collected data of all consecutive patients which undergoing OAGB in two SICOB center from January 2019 to December 2021, performed by three different surgeons (1 senior and 2 defined as trainees). Data collected included biometric features (BMI - comorbidities - sex - previous surgery - ASA) intraoperative data (operative time - type of anastomosis - intraoperative complications - blu test) post-operative data (length of stay - post-operative complications). Both trainees before start their learning curve for OAGB were able to perform laparoscopic basic technique and Sleeve gastrectomy. The procedure has been divided in more steps: 1 angle of His release – 2 entering the lesser sac from Crown foot – 3 pouch creation – 4 ileal loop measurement – 5 anastomosis. Cumulative Sum (CUSUM) was used to evaluate the achievement of learning curve. Furthermore, we ask to the trainees which step of procedures as been found more difficult during each procedure.

Results

A total of 225 patients have been evaluated (75 per groups has been evaluated). No differences in biometric features have been found between the three groups. No intra or post-operative complications were found. After CUSUM test the two trainees achieved the learning curve after 49 and 52 procedures. During the first 40 procedure the more difficult step for both trainees were the step 1 and 2, after the 40 procedures both trainees does not found many difficulty during the entire procedure.

Conclusion

OAGB is an arising procedure, that requires the acquisition of advanced laparoscopic skills. In our case series we found that the achievement of a learning curve after at least 50 procedures.

O-18
ACID AND BILE REFLUX ESOPHAGITIS PREVENTION BY MODIFIED FUNDOPLICATION OF THE EXCLUDED STOMACH IN ONE-ANASTOMOSIS GASTRIC BYPASS: A RANDOMIZED CONTROLLED TRIAL

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Background

The one-anastomosis gastric bypass (OAGB) is now a common metabolic/bariatric procedure. The impact of wrapping the fundus of the excluded part of the stomach in OAGB to treat patients with obesity and acid/bile reflux esophagitis (RE) is unclear.

Objectives

We aimed to assess the impact of this operation in a randomized controlled trial (RCT).

Methods

The study design was a single-center prospective, interventional, open-label (no masking) RCT (FundoRing Trial) with 1-year follow-up. Endpoints were body mass index (BMI, kg/m²) and acid and bile RE assessed endoscopically by Los Angeles (LA) classification and 24-hour pH impedance monitoring. Complications were graded by Clavien-Dindo Classification (CDC).

Results

100 patients (n=50 FundoRingOAGB [f-OAGB] vs n=50 standard OAGB [s-OAGB]) with complete follow-up data were included in the study. During OAGB procedures, patients with hiatal hernia underwent cruroplasty (29/50 f-OAGB; 24/50 s-OAGB). There were no leaks, bleeding, or deaths in either group. At 1-year, BMI in the f-OAGB group was 25.3±2.77 (19-30) vs 26.48±2.8 (21-34) s-OAGB group (p=0.03). In f-OAGB vs s-OAGB groups, respectively, CDC grade I acid RE was seen in 1 vs 12 patients (p=0.001) and grade I bile RE in 0 vs 4 patients (p<0.05).

Conclusion

Routine use of a modified fundoplication of the OAGB-excluded stomach to treat patients with obesity decreased acid and bile reflux esophagitis significantly more effectively than standard OAGB at 1 year in a randomized controlled trial.

O-19

ALIMENTARY LIMB OBSTRUCTION FOLLOWING ONE ANASTOMOSIS GASTRIC BYPASS: A RARE CASE AND LITERATURE REVIEW

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Background

Advances in surgical techniques and technology especially in bariatric-metabolic surgery are an ongoing process which have enabled surgeons to achieve operative success and satisfaction for severe obese patients undergoing these procedures. Although the incidence of complications remains an issue for many surgeons which may have consequences postoperatively, abdominal symptoms following laparoscopic bariatric-metabolic surgery remains a challenge for the surgeon in obtaining a definite diagnosis. There are various complications which can lead to abdominal pain post-op which cause gastrointestinal impairment, an example bowel obstruction which has been seen following Roux-en-Y gastric bypass. Here, we report a rare case of bowel obstruction of the alimentary limb following OAGB as a result of a V-loc™ suture which grasped and obstructed the alimentary limb causing obstruction and chronic abdominal complaints.

Objectives

The aim of the study was to review our experience of bowel obstruction due to V-loc™ suture following bariatric surgery and compare the outcomes with other cases.

Methods

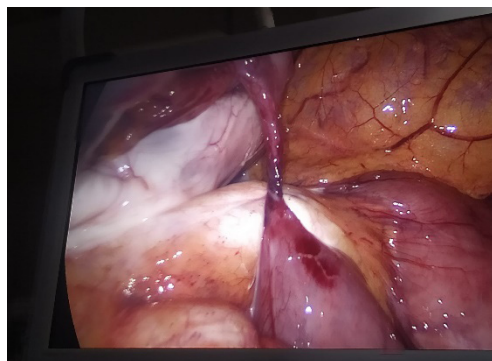
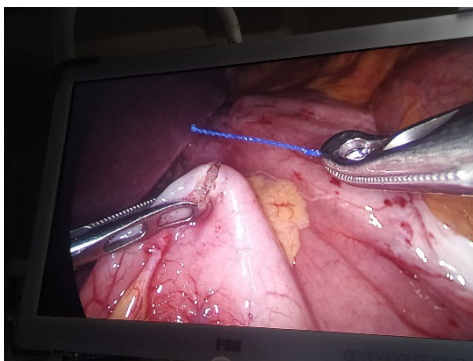
We performed a literature review of similar registered cases which used V-loc™ sutures during bariatric-metabolic surgery and compared the outcomes.

Results

After literature review, to our knowledge, only five cases of obstruction caused by V-loc™ sutures following gastric bypass has been reported which verifies the minimal incidence in bariatric-metabolic surgeries.

Conclusion

Despite advancements in bariatric-metabolic surgery, complications remain an issue for many surgeons, and abdominal symptoms following laparoscopic bariatric surgery continue to be a challenge in obtaining a definite diagnosis. This review underscores the importance of considering internal hernias as a potential cause of recurrent symptoms in patients with a history of bariatric surgery. Overall, this study adds to the existing body of literature on complications in bariatric-metabolic surgery and highlights the importance of ongoing research and innovation in this field. The report also emphasizes the value in identifying rare cases and enhancing our understanding of the potential risks associated with surgical procedures.



O-20

AMBULATORY BARIATRIC SURGERY IS SAFE AND FEASIBLE. EXPERIENCE FROM A HIGH VOLUME BARIATRIC CENTER

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Introduction

Enhanced recovery protocols have brought faster recovery, fewer complications and a reduction in hospitalization time. Shorter hospital stay results in less infections, greater comfort for the patient and lower cost.

Objective

To assess the feasibility and safety of outpatient bariatric surgery in a high-volume bariatric center.

Methods

Retrospective review of a prospective database of all patients undergoing Sleeve Gastrectomy (SG), One Anastomosis Gastric Bypass (OAGB), Roux-en-Y Gastric Bypass (RYGB) and revisional surgery (RS) after implementation of enhanced recovery protocols. Inclusion criteria was age between 18 and 65, BMI lower than 65, no use of anti coagulants and no severe medical conditions. Anthropometric data, comorbidities, length of stay, need for readmission or reoperation and 30-day morbidity were recorded

Results

From March 2021 to February 2023, 1109 patients underwent bariatric surgery. 148 didn't fulfill outpatient criteria and were excluded from analysis. Of the 960 included patients 85.4% were female, mean BMI was 44.3 (22.2-64.9, SD 6.3) and age 40.7 (18-65, SD 9.9). 65.2% were SG, 25.9% OAGB, 3.5% RYGB and 5.4% RS. Fifty-six (5.8%) required a longer than 24 hours stay; being significant intra operative bleeding (27%) the most frequent cause, followed by liquid intolerance (23%) and pain (9%). Readmission rate was 1.46%, and 0.7% required reoperation. There was no 30-day mortality. There was no significant difference in age, gender, BMI, hypertension or diabetes between the outpatient group or the one requiring longer stay. Hypertensive patients had a higher readmission rate (3.7% vs 0.85%, P=0,02), as did RYGB (3%) and OAGB (2.8%) when compared to sleeve gastrectomy (0.9%). After adjusting by age, gender, BMI, diabetes, hypertension, type of surgery and surgeon, being hypertensive remained an independent risk factor for readmission (OR=4.47), and sleeve gastrectomy had the lowest readmission rate (OR= 0.34).

Conclusions

Outpatient bariatric surgery is feasible and safe. Readmission and reoperation rate were acceptable. Those patients suffering from hypertension and those undergoing RYGB and OAGB seem to have a higher readmission rate. Enhanced recovery protocols may play an important role in outpatient bariatric surgery.

O-21

AMBULATORY BARIATRIC SURGERY: WHEN IS IT FEASIBLE? OUR PRELIMINARY EXPERIENCE IN OVER 250 PATIENTS

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Background

Ambulatory Bariatric Surgery (ABS), in spite of its preliminary results, has not had great acceptance among surgeons because of high potential risk of perioperative complications. However, due to Covid19 pandemic, the imperative need of hospital stay shortening forced Specialized Bariatric Centers to optimize processes and protocols to reach such aim.

Objective

To demonstrate the Non-Inferiority of ABS in selected patients, according to conventional hospital stay (CHS) (>24h).

Study Design

Multicentric, Cohort study.

Methods

The first 250 patients who met enrollment criteria were submitted to Roux-en-Y Gastric Bypass from Specialized Bariatric Centers from the cities of Paraná and Santa Fe (Argentina) and Santiago (Chile), from march 2020 to December 2022. These requirements were: first postop overnight stay in same city of procedure, BMI <45, PreOp Weight Loss >10%, Surgical Time <90 minutes, Procedure initiation before 10am, Early Deambulation and Liquid Tolerance within 4hr postop. For Group 1 (G1), the first 125 consecutives patients were recruited for ABS, and the second group of 125 consecutives patients were for Group 2 (G2), for CHS. Hospital Stay (in hours), Readmission Rate, 30-day Complication Rate, Mortality Rate, Analgesia Requirement (in opioid equivalent), and Pain Management at discharge (in Visual Analog Scale) were assessed.

Results

Mean Hospital Stay in G1 was 12.2±2.1hr vs 29.2±3.2hr in G2. In 1 patient of G1 (0.8%) readmission was needed due to GI Bleeding, and in other 3 patients (2.4%) hospital stay was extended to 24hr due to pain management requirement. As for G2, 1 patient was readmitted (0.8%) because of Hemoperitoneum and its correspondent reoperation, and in another 2 cases (1.6%) hospital discharge must be delayed due to nausea and abdominal pain, respectively. No 30-day complications were reported in the 3 Bariatric Centers participating of the study. Initial BMI was 38.8±3.1 vs 45.1±4.9, in G1 and G2, respectively.

Conclusions

ABS is safe and feasible in selected patients, reducing cost of unnecessary hospitalization and demonstrates its non-inferiority regarding perioperative complication rates when it is compared to conventional hospital stay (>24hr).

O-22

ANATOMICAL REVERSAL OF GASTRIC BYPASS – INDICATIONS, SURGICAL METHODS AND OUTCOMES OF 51 PATIENTS OPERATED FROM 2019 TO 2021

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Background

Roux-en Y gastric (RYBG) bypass can be considered the gold standard in bariatric surgery with well-known long-term effects on weight-loss and obesity-related comorbidities. However, a small fraction of patients (0.5%) experience intractable severe side effects or complications after the surgery.

Objectives

We describe two sub-groups; group 1: patients with complications after gastric bypass and multiple re-operations due to small bowel obstruction and group 2: patients with severe intractable symptoms related to the RYGB. Anatomical reversal is a surgical approach to be considered. In this study, the efficacy and safety of anatomical reversal is assessed in a relatively large cohort as compared to previous studies.

Methods

A prospectively registration of patients undergoing anatomical reversal was performed. Assessment of symptoms (abdominal pain, nausea and vomiting, diarrhoea, malnutrition, food intolerance, early dumping, hypoglycaemia, chronic fatigue, and psychological intolerance) was done with a VAS-symptom score preoperatively and at one-year follow-up after reversal. Patients were categorised in two groups according to their main symptoms. Group 1; 38 patients (75%) with abdominal pain as the main symptom, (24 pts. on chronic opioid treatment) and group 2: 13 patients with psychological intolerance/chronic fatigue as the main symptom.

Results

Median surgical time was 78 minutes (48-130) and hospital stay was 2.9 days (1-12). In group 1, anatomical reversal resulted in complete relief of abdominal pain in 65%, significant improvement in 21% while 15% of patients had no symptom relief. In group 2, all but one (12/13) had complete relief of psychological intolerance. All eight patient with severe hypoglycaemia (VAS 4-10) experienced complete relief of symptoms. At one-year follow-up, mean weight regain was 8.6 kg (-15 to 41 kg), with significant correlation from time (years) of index surgery to the reversal (p : 0.02). Early complication rate was 16% (5 leaks, 2 bleedings) and late complication rate 14% (5 re-operations due to GERD). Adjustments in the surgical technique lead to a lower complication.

Conclusion

Symptom relief is obtained in most patients one year after surgery. Patients with chronic abdominal pain after gastric bypass are challenging. Complications are of concern but can be reduced with adjustments in the surgical technique.

O-23

ANTRECTOMY AS A RESCUE ANTI-REFLUX PROCEDURE FOLLOWING ROUX-EN-Y GASTRIC BYPASS FOR POST-SLEEVE GASTRECTOMY REFLUX

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Background

Many patients with significant reflux after laparoscopic sleeve gastrectomy (LSG) will be offered Roux-en-Y gastric bypass (RYGB) to help manage their symptoms, however, studies show that persisting reflux symptoms exist in many and that this can frequently be confirmed by finding abnormal oesophageal acidification on post-RYGB studies. Unlike primary RYGB whereby the gastric body remains to produce acid in the gastric remnant, the post-LSG stomach can mimic features of the Retained Antrum Syndrome. This occurs as G cells in the retained antral tissue are not exposed to intraluminal acid, resulting in a continuous secretion of gastrin and intense stimulation of parietal cell acid production in the proximal small stomach. Performing antrectomy is a simple way to control acid production and help manage symptoms in those patients where stomal ulceration or reflux symptoms are an issue following LSG to RYGB conversion.

Objective

To determine the potential of antrectomy as a surgical treatment for persisting acid-related disease following LSG to RYGB conversion.

Methods

6 patients were identified who underwent antrectomy following LSG to RYGB, 1 for recurrent gastro-enterostomy anastomotic ulceration and 5 for persisting reflux symptoms.

Results

Patients underwent the antrectomy procedure at a mean of 2.1 years after the RYGB procedure. No peri-operative complications were noted, and the median post-operative hospital stay was 1 day. All patients had ceased PPI therapy at 2- and 12 weeks post-procedure. One patient agreed to pre- and post-operative oesophageal pH testing with a significant reduction oesophageal acid exposure noted. 2 patients developed late RYGB functional complications of reactive hypoglycaemia and abdominal pain.

Conclusion

Remnant gastrectomy appears successful for management of persisting severe reflux and acid related disease after LSG to RYGB conversion. As patients with severe reflux after LSG appear to be at risk from post-RYGP side effects, we would not recommend this as a routine step during LSG to RYGB conversion, as it confers irreversibility.

O-24

ARTIFICIAL INTELLIGENCE BASED STEP RECOGNITION OF SLEEVE GASTRECTOMY, EXPERIENCE FROM ONE TERTIARY CENTER

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Background

In recent years, use of artificial intelligence (AI) has gained popularity for interpretation of medical imaging. However, the use of AI for interpretation of surgical video has been limited. Leveraging AI for automated annotation of surgical video has potential applications for improving surgical quality, such as correlation of intraoperative events to postoperative outcomes, surgical training and performance assessment, and may eventually enable real-time intraoperative decision support.

Objective

Demonstrating initial results of Surgical Intelligence Platform in a real- world surgical department within an academic medical center.

Methods

Manually annotated surgical videos were used to train a computer vision AI algorithm to autonomously identify surgical steps for sleeve gastrectomy: preparation, adhesiolysis, dissection, gastric transection, reinforcement, specimen extraction, packaging and final inspection. The model was trained in a multi-task approach, meaning that a single, generalized, model was trained to recognize steps of different procedure types. A total of 8,249 procedures were used for the training phase, 3,314 for testing, and 1,976 for validation. The model was then trained to automatically identify whenever the visual field is out of body (OOB), automatically blurring the image at these times, therefore protecting the privacy of patients and surgical teams. Procedure step duration was then gathered based on procedures from the medical center and automatically analyzed, from December 2020 to January 2023.

Results

Following training, accuracy of step recognition was 95.98%, and OOB recognition was 99.62%. In the real-world setting, average step duration of the different surgical steps were [Minutes]: overall duration- 49:30, preparation- 7:04, Dissection- 15:10, Gastric transection- 14:00, reinforcement- 6:42, specimen extraction- 4:00, packaging-1:00, final inspection- 6:33.

Conclusion

We present results of an AI-enabled algorithm for automated recognition of surgical steps and OOB events in sleeve gastrectomy footage, and data from a real- world surgical department. Automated video annotation has potential applications in quality improvement, correlating intraoperative events to postoperative outcomes, surgical training, self-assessment, performance review, and may enable real-time intraoperative decision support in the future.

O-25

ASSESSMENT OF THE EFFECTIVENESS OF LAPAROSCOPIC SLEEVE GASTRECTOMY IN TREATING METABOLIC SYNDROME IN PATIENTS OVER 50 YEARS OLD

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Background

Metabolic syndrome is a cluster of risk factors that increase the probability of coronary heart disease, diabetes and stroke. As the prevalence of metabolic syndrome continues to rise, effective treatment options are crucial to reduce associated morbidity and mortality rates. The results of this study may provide valuable insights into the use of LSG as a treatment option for metabolic syndrome in an ageing population.

Objectives

The study aimed to investigate the effect of laparoscopic sleeve gastrectomy in treating metabolic syndrome in patients over 50 years old.

Methods

A single-surgeon, observational and retrospective study was conducted from January 2010 to January 2023. A total of 786 patients who underwent laparoscopic sleeve gastrectomy as a primary procedure were included. Follow-up was scheduled 1, 3, 6, 12 and 24 months after surgery, and then statistical analysis of the collected data was performed.

Results

The patients were divided into two groups: below (n=539) and above 50 years old (n=247). Mean preoperative BMI was 47.71 kg/m² and 47.01 kg/m² respectively. After 24 months of follow-up mean BMI decreased to 29.03 kg/m² and 30.73 kg/m² respectively. Mean preoperative HbA1C concentrations were 5.77% (<50 y.o.) and 6.25% (>50 y.o.), to reach 5.66% and 5.53% after 2 years. Statistically significant decreases in levels of triglycerides, LDL, HDL and fasting glucose were observed in both groups with no significant differences between them. 31 (3.9%) patients under 50 y.o. reduced or completely discontinued their antihypertensive treatment as compared to 21 (8.5%) patients in over 50 y.o. group.

Conclusion

Laparoscopic sleeve gastrectomy is an effective method for the treatment of components of metabolic syndrome regardless of age.

O-26

BARIATRIC AND METABOLIC SURGERY IN PATIENTS WITH LOW BODY MASS INDEX: AN ONLINE SURVEY OF 543 BARIATRIC AND METABOLIC SURGEONS

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Background

Metabolic and bariatric surgery (MBS) in patients with low body mass index patients is a topic of debate. This study aimed to address all aspects of controversies in these patients by using a worldwide survey.

Methods

An online 35-item questionnaire survey based on the existing controversies surrounding MBS in class 1 obesity, was created by 17 bariatric surgeons from 10 different countries. Responses were collected and analyzed by the authors.

Results

Total 543 bariatric surgeons from 65 countries participated in this survey. 52.29% of participants agreed to the fact that MBS should be offered to the class-I obese patients without any obesity related comorbidities. The majority of the respondents (68.43%) believed that MBS surgery should not be offered in patients under the age of 18 with class I obesity. About 81.01% of respondents agreed on the fact that surgical interventions should be considered after failure of non-surgical treatments. Endoscopic interventions were found not suitable by 246 of 360 respondents (68.61%). Only 126 of 360 respondents (35.0%) preferred a RYGB/OAGB for patients with class I obesity. Despite different responses, the majority of the respondents (305/360; 84.72%) believed that metabolic surgery is cost effective in patients with class I obesity. Majority of surgeons recommended the sleeve gastrectomy as the procedure of choice. In case of RYGB for both the alimentary limb (AL) and the biliopancreatic limb (BPL) a length of 50 to 100 cm was preferred (139 / 360 respondents (38.61%) and 176 / 360 respondents (48.89%) respectively). The BPL for OAGB was preferred to be 150 cm (122/360 respondents; 33.89%), or 100 cm (51 of 360 respondents; 14.17%).

Conclusion

This survey demonstrated worldwide variations in metabolic/bariatric surgery in patients with class 1 obesity. Precise analysis of these results is useful for identifying different aspects for future research and consensus building.

Keywords: Bariatric surgery, metabolic surgery, Low BMI, Survey.

O-27

BARIATRIC MULTIVITAMINS AS PART OF PRE-SURGERY PROTOCOL LEADS TO IMPROVED TOLERANCE POST OPERATIVELY

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Background / Introduction

The requirement for multivitamin supplementation to prevent nutritional deficiencies post-bariatric surgery is widely reported in the literature. Despite the risk of deficiencies, patient adherence to recommendations is poor. Factors relating to non-compliance include patient related (demographics and socioeconomic), therapy related (regime, side effects, pill size or taste), economic factors, healthcare or bariatric surgery related in terms of complications or gastrointestinal complaints. There is limited data published exploring these factors influencing neither patient adherence nor recommendations on improving adherence. At present in Australia, there is no recommendation to begin a multivitamin supplement in the pre-operative phase.

Objectives

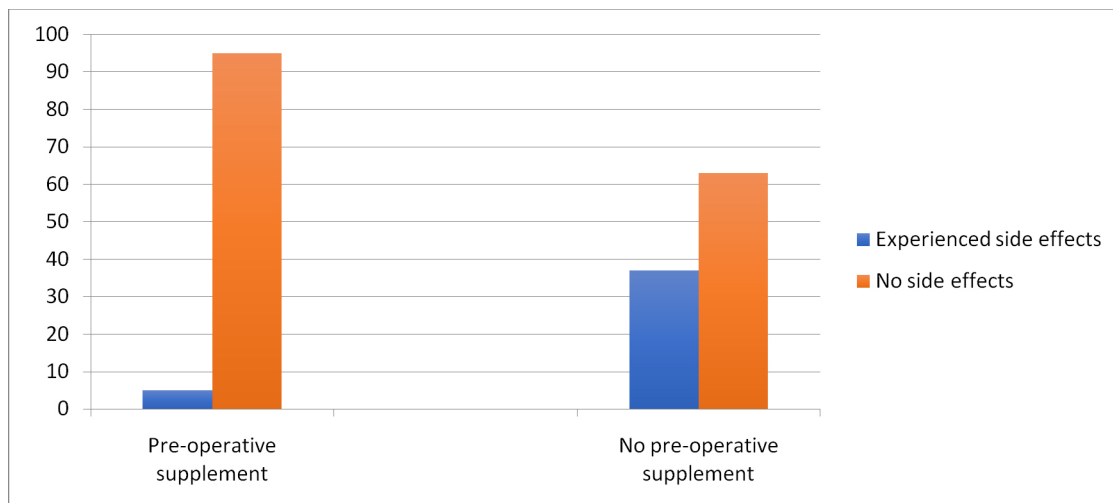
The study aimed to analyse patient's tolerance to bariatric multivitamins both pre and post operatively overall. To further compare tolerance post operatively based on their pre-operative supplement prescription and the benefit of starting a multivitamin preoperatively to improve patient tolerance to gastro-intestinal complaints and side effects.

Methods

A retrospective study in a single private practice clinic, analysing patient compliance and tolerance to bariatric multivitamins. All patients were recommended to start a bariatric multivitamin at least 1 month prior to surgery. Post surgery patients were asked about their compliance, tolerance and side effects (if any) to the bariatric multivitamin.

Results

43% of patients took a supplement of some kind prior to surgery. 57% a bariatric multivitamin, 28% a generic multivitamin and 19% specific vitamin supplement rather than a complete multivitamin. Regardless of supplement type 95% of patients reported tolerance post operatively. 1 patient was able to tolerate pre and immediately post surgery, but 3 months later is unable to tolerate. Of the patients who did not consume a multivitamin preoperative 37% experienced side effects, including nausea, vomiting or reflux.



Conclusion

Patients often report ceasing multivitamin supplements due to gastro-intestinal complaints specifically nausea and vomiting, despite recommendations of taking with food. Starting a multivitamin pre-surgery improved overall tolerance and early acceptance of the bariatric multivitamin. Further study is recommended to develop a pre-operative multivitamin protocol with view improve side effects post operatively whilst optimising nutritional status pre operatively.

O-28

BARIATRIC REOPERATIONS – AN ONGOING SURVEY FROM A HIGH-VOLUME CENTER IN ATHENS

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Background

Bariatric surgery (BS) is the most effective treatment for achieving weight loss in patients living with obesity. The high frequency of BS has inevitably increased the number of bariatric reoperations.

Objectives

The 13-year experience with revisional bariatric surgery (RBS) in a high-volume center in Greece.

Methods

Retrospectively, 64 individuals were treated with RBS for either weight regain (n=27, 42.2%), insufficient weight loss (n=8, 12.5%), complications (n=22, 34.3 %) or both suboptimal weight loss and complication (n=7, 10.9%). Demographic data, comorbidities, interval time and indications for RBS were examined.

Results

From 5/2010 through 02/2023, 1868 bariatric surgeries were performed in our institution in total. Forty five percent of RBS (n=29) were performed during the last two years. Most of the patients reoperated were females (67.1 %), and the mean age of the cohort was 42.5 years (21-64). The initial operation was performed elsewhere in 52 cases (81.2%) with an average interval time of 8.9 years (0.5-20). Fifty-one patients underwent one RBS (79.6%), 12 underwent two RBS (18.7%) and 1 patient underwent three RBS (1.6%). The original operation was predominantly adjustable gastric banding (AGB) (n=41, 64%), followed by laparoscopic great curvature plication (LGCP) (n=12, 18.7%), laparoscopic sleeve gastrectomy (LSG) (n=9, 14%), vertical banded gastroplasty (VBG) (n=1, 1.6%), and Roux-en-Y gastric bypass (RYGB) (n=1, 1.6%). The revisional surgeries were band removal (n=11, 17.2%), LSG (n=23, 36%), RYGB (n=8, 12.5%), one anastomosis gastric bypass (OAGB) (n=7, 10.9%), single anastomosis duodenoileal bypass (SADI) (n=2, 3.1%), single anastomosis sleeve ileal bypass (SASI) (n=1, 1.6%), large pouch gastric bypass (n=2, 3.1%), total gastrectomy (n=2, 3.1%), LGCP redo (n=1, 1.6%), RYGB undo (n=2, 3.1%), LGCP undo (n=3, 4.7%), and change of access port site (n=2, 3.1%).

Conclusion

Bearing in mind that obesity is a lifelong condition, a rise in bariatric reoperations is expected almost a decade after the increase of bariatric surgeries.

O-29

BARIATRIC SURGERY AND KIDNEY STONE DISEASE: AN EXPERIENCE OF AN ITALIAN BARIATRIC CENTRE OF EXCELLENCEIlenia Coluzzi*ICOT Hospital, Latina, University of Rome, Dept. of General Surgery, Latina, Italy***Background**

The correlation between obesity and kidney stones is demonstrated by numerous epidemiological studies: the prevalence of urolithiasis is higher in obese (11.2%) and overweight patients (9.1%). Obesity is associated with a greater excretion of solutes responsible for the stones' formation like calcium, oxalates and sodium, and with a lower urine pH. Bariatric surgery allows a substantial weight loss, a resolution of mortality and a reduced incidence of obesity-related comorbidities, but can lead to long-term complications such as urolithiasis. This complication is estimated to be increased of 7.6% in bariatric patients, and it is higher in malabsorptive procedures. The average time for urolithiasis to occur is 1.5 years after surgery.

Methods

The study was conducted by the Division of Urology and the Division of General-Bariatric Surgery of ICOT hospital, Latina, University of Rome "La Sapienza" between January and August 2022. 185 patients underwent nutritional assessment 1.5-2 years after bariatric surgery. Nutritional counselling was performed and anthropometric parameters (weight, height, BMI and %EWL) were measured. Patients who have found to have crystals in their urine (25 patients – 13.5%) were sent to the Division of Urology to evaluate the possible presence of stones. Urolithiasis was diagnosed through an abdominal CT without contrast.

Results

Kidney stones disease was described in 12 patients (6.49%) out of the 25 evaluated by the Division of Urology. These patients had a mean age of 45 years, a mean BMI of 30.41 and mean %EWL of 63.2. They were all female and the type of stone was found to be calcium oxalate in every patient. Of 12 patients, 2 underwent RYGB, 2 OAGB and 8 Sleeve Gastrectomy (SG). The mean follow-up was 17.25 months after surgery.

Conclusion

Bariatric surgery can lead to long-term complications including an increased risk of kidney stones. From our survey, 6.49% of patients presented urolithiasis diseases. The majority of the patients underwent Sleeve Gastrectomy. This may partly explain by the fact that the SG is the most performed bariatric procedure worldwide and that it brings to an inadequate fluid and calcium intake, both implicated in pathogenesis of urinary stone disease.

O-30

BARIATRIC SURGERY AND WEIGHT REGAIN: A BIBLIOMETRIC ANALYSIS

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Background

Although bariatric surgery is the most successful method for individuals to lose weight, they may regain the weight in the long-term postoperative period. The amount of weight gained varies depending on the person and their eating habits.

Objectives

The aim of this study is to conduct a bibliometric analysis related to bariatric surgery and weight gain, and to determine the content and trends of the articles published in the field.

Methods

The Web of Science database was scanned using the keywords “bariatric surgery” and “weight regain”. The distribution of publications and citations in bariatric surgery and weight gain by year, the distribution of publications by journal, research areas and countries, and co-authorship, co-occurrence and co-citation were analyzed. The VOSviewer program was used for the analysis. Grey literature, books and book sections were not included in the study.

Results

A total of 2477 articles were included in the research. The results indicated that the most published and cited journal on the topic was “Obesity Surgery”, while the most publishing country was the United States with 935 publications. The most commonly used keywords were “bariatric surgery”, “obesity”, “pregnancy” and “weight loss”. Harvard University was the most publishing institution with a total of 127 publications related to the field. The topics of the most cited publications included “Nutrition and Dietetics”, “Diabetes” and “Obstetrics and Gynecology”. The year with the most publications was 2019 since 1987.

Conclusion

In the study, current publications, research trends and trends related to bariatric surgery and weight gain were analyzed with bibliometric analysis. It has been concluded that weight regain after bariatric surgery should be focused on since it seriously affects individuals’ lives, is a factor that reduces the probability of success of surgical treatment, and imposes additional burden on the healthcare system.

O-31

BARIATRIC SURGERY FELLOWSHIP TRAINING PROGRAMS: GENERAL PRINCIPLES AND THE SAUDI EXPERIENCE

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Background

Several programs are existing worldwide that train and graduate fellows to specialize in bariatric surgery, and to be certified to practice the specialty. The current health care system in Saudi Arabia is struggling to meet the demand of about 30% of the whole population needing bariatric surgery with long waiting lists, especially in public hospitals, as the prevalence of obesity is rising exponentially.

Objectives

To highlight the principles for developing bariatric surgery fellowship training programs. To report our work and outcomes on the “Advanced Laparoscopy and Bariatric Surgery Fellowship Program”.

Methods

The Saudi Commission for Health specialties (SCFHS) adopted and launched a novel nationwide program, namely “Advanced Laparoscopic and Bariatric Surgery Fellowship Program” in January 2023. Work on the curriculum was initiated by the Saudi Arabian Society for Metabolic and Bariatric Surgery (SASMBS) in 2020, then endorsed to the SCFHS for further development and implementation. This new program was also built on King Saud University “Minimally Invasive and Bariatric Surgery Program” experience since 2015, and benchmarked with national and international fellowship training guidelines and standards. Several committees assigned by the SCFHS guided this process to assure scientific program development and its proper implementation, and assure products’ quality.

Results

The program involves goals, responsibilities of the curriculum implementation stakeholders, program entry requirements, duration and rotations, procedures logbook, program evaluation, policies and procedures. The CanMEDS framework was adopted as a copyright for learning competencies. Teaching involves fellowship-general and specific educational activities throughout the week. Assessment and evaluation involve formative and summative assessment modules that monitor the fellows’ progress and assure their competence upon graduation. The next step is for training centers to check the SCFHS requirement and apply for accreditation of the center. Once the accreditation standards are met, the training center can start training fellows with a ratio of 1 trainer per 100 bariatric surgery cases per 1 candidate per year.

Conclusion

The rising prevalence of obesity in the kingdom and gulf states requires developing robust programs to train and graduate competent fellows in bariatric surgery, to fulfill needs of the population and decrease of long waiting lists.

O-32

BARIATRIC SURGERY IMPROVES OUTCOMES OF FUTURE INPATIENT ADMISSIONS OF PATIENTS WITH TYPE 2 DIABETES MELLITUS: AN ANALYSIS OF HOSPITAL INPATIENT ADMISSIONS IN OKLAHOMA

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Background

The study examines the impact of bariatric surgery on hospitalization rates, length of stay, charges, and mortality in patients with type 2 diabetes in Oklahoma.

Objective

The study aimed to determine whether bariatric surgery reduces hospitalization rates, length of stay, and charges, and decreases the risk of death in patients with type 2 diabetes in Oklahoma.

Methods

The researchers used data from the Oklahoma Inpatient Discharge Public Use File from 2016-19 to categorize hospital admissions with and without type 2 diabetes by ICD-10 diagnosis codes and CPT procedure codes. They excluded patients less than or equal to 20 years of age, charges less than \$100, and invalid lengths of stay in their analysis.

Results

The annual hospitalization rate for adults was 125 per 1000, while for those with T2DM, it was 332 per 1000 (Figure 1). Of 1,516,111 admissions, 27% were T2DM patients, who stayed longer in the hospital (5.8 days) with higher charges (\$56,300) than non-diabetic patients (4.9 days, \$50,400). Bariatric surgery reduced the risk of admission with diabetes by 16% (RR 0.84, CI 0.83-0.86, P<0.001), and by 43% in primary diabetes diagnosis (RR=0.57, CI 0.53-0.63, P<0.001). Diabetic and non-diabetic patients had similar lengths of stay (4.11 vs 4.18 days, respectively, P=0.536) after bariatric surgery (Table). T2DM patients with a history of bariatric surgery had a lower risk of death (RR = 0.29, CI 0.24-0.34, P<0.001) compared to those. Bariatric surgery also decreased the risk of death in non-diabetic patients (RR = 0.19, CI 0.17-0.21, P<0.001).

Conclusion

T2DM is associated with increased hospital utilization, length of stay, hospital charges, and increased risk of common admission diagnoses and necessary procedures during their stay. Bariatric surgery may lead to a decrease in these factors by decreasing the prevalence and severity of T2DM in Oklahoma.

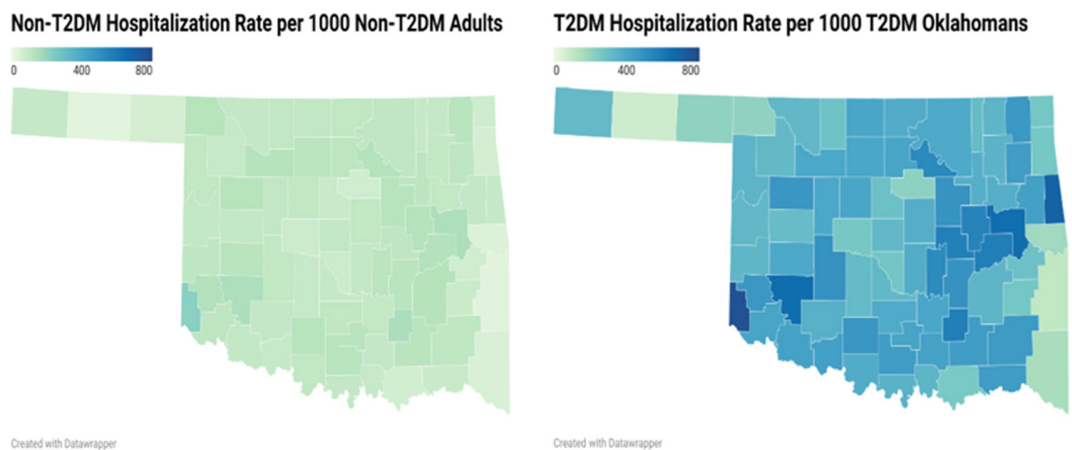


Figure. Oklahoman's with T2DM hospitalized at a higher rate and are disproportionately from more rural areas.

Table. Bariatric surgery is associated with reduced risk of severe conditions on admission and/or requiring significant procedures during admission in Oklahoma from 2016-2019.

Diagnosis/Procedure	Diabetic/Not-diabetic	Bariatric surgery(%)	No bariatric surgery(%)	RR (95% CI)
Acquired Limb Loss	diabetic	42 (1.6%)	12257 (3.0%)	0.53 (0.46-0.62)
	not diabetic	42 (0.5%)	6590 (0.6%)	0.83 (0.71-0.97)
AKI	diabetic	330 (12.6%)	100207 (24.6%)	0.51 (0.48-0.54)
	not diabetic	665 (7.9%)	144161 (13.1%)	0.60 (0.58-0.63)
Heart Failure	diabetic	392 (14.9%)	125179 (30.8%)	0.48 (0.46-0.51)
	not diabetic	651 (7.7%)	156073 (14.2%)	0.54 (0.52-0.57)
CABG	diabetic	21 (0.8%)	5482 (1.3%)	0.59 (0.48-0.74)
	not diabetic	21 (0.2%)	6619 (0.6%)	0.41 (0.33-0.52)
Central Line	diabetic	132 (5.0%)	26168 (6.4%)	0.78 (0.72-0.85)
	not diabetic	413 (4.9%)	49192 (4.5%)	1.10 (1.04-1.15)

O-33

BARIATRIC SURGERY IN TURKEY: A WARNING REGARDING THE QUALITY OF ONLINE PATIENT INFORMATION

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Introduction

Medical tourism has become increasingly popular, with Turkey remaining one of the most frequented destinations. While it would be very difficult to assess the patient’s experience and operation journey, we looked at the information advertised by Turkish clinics online. We have undertaken a study of online sites of Turkish clinics offering bariatric surgery that target the UK market; assessing their readability and the quality of the information used in their marketing practices using simulated patient searches.

Methods

Multiple search engines were used, in ‘Incognito’ windows. Pre-defined search terms were used to mimic a patient search. 25 sites were identified on the initial search, 17 of which fulfilled the inclusion criteria. The sites were put through a Fleisch Kincaid Readability calculator, the DISCERN and IPDAS validation tools for healthcare information quality. Two medical professionals and one lay person assessed all the sites using these domains independently.

Results

The average reading age across all sites was 43.1, considered “difficult” to read. For Discern none of the websites gained a score suggestive of a high-quality piece of information for patients with the highest scoring website 2.77/5. 12 of the websites scored between 1 and 2 suggesting serious and extensive shortcomings. Overall average IPDAS score of the sites was 3.39/12.

Table to show the Results when scoring each site using the IPDAS tool

Qualifying Criteria	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Describes health condition	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
2. States treatment options clearly	✓	x	✓	x	x	x	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3. Describes options	✓	x	✓	x	x	x	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4. Describes positive features	x	✓	✓	x	x	x	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5. Describes negative features	x	✓	x	x	x	x	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6. Describes the experience of the consequence of options	x	x	x	x	x	x	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Certifying Criteria	x	X	x	x	x	x	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
7. Balanced and equal detail for all options	x	X	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
8. Citation to evidence	x	X	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
9. Publication date provided	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
10. Update policy provided	x	X	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
11. Information about levels of uncertainty around event	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
12. Funding source	x	X	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Total/12	2	2	3	0	0	3	5	6	5	1	4	1	0	3	6	11	7
Average	2.33	0.00	4.67	3.33	1.33	8.00	1.00	2.33	6.33	3.33	3.00	1.00	5.67	1.33	9.33	3.67	1.00
Overall Average 3.39																	

Conclusion

The readability of the websites is set at an inappropriate level for the target audience with poor quality health information which must be considered by patients wishing to undertake Bariatric surgery abroad.

O-34

BARIATRIC SURGERY RAPIDLY REVERSES NONALCOHOLIC FATTY LIVER DISEASE: DISCREPANCIES IN HISTOLOGICAL REMISSION

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Aims

Bariatric surgery for reversing nonalcoholic fatty liver disease (NAFLD) offers promise, but limited evidence on discriminating therapeutic effects. To assess the discrepancies in histological remission after bariatric surgery in patients with NAFLD.

Materials and Methods

This prospective multicenter cohort included NAFLD confirmed patients who underwent both liver biopsy and magnetic resonance imaging (MRI). Clinical, histological, and radiological data were collected before and during the first year after surgery.

Results

At 1 year, fibrosis improved without nonalcoholic steatohepatitis (NASH) worsening in 78.8%, while NASH was resolved without fibrosis worsening in 42.1% of patients (95% confidence interval [CI]: 63.0%-91.3% and 26.8%-58.2%, respectively; all $p < 0.001$). Liver fat fraction measurement by MRI was effective in discriminating hepatic steatosis, with area under curve of 0.94 and 0.95. LFF remission occurred in 90.4% of patients (95% CI: 78.9%-95.5%; $p < 0.001$). Intriguingly, after identifying two distinct LFF trajectories among patients after surgery, we found that the cut-off point of LFF levels to differentiate NASH remission (NAFLD activity score improvement ≥ 2 points) from non-remission was 78.8% (area under the curve, 0.923; 95% CI: 0.82-1.00). Compared with LFF non-responders (relative decline in LFF $< 78.8\%$), LFF responders ($\geq 78.8\%$) were with significant histological remission in steatosis, ballooning, lobular inflammation, and fibrosis ($p = 0.003, 0.011, 0.024, \text{ and } 0.026$, respectively).

Conclusions

Bariatric surgery provides rapidly alleviation of NAFLD and its advancing stages. Liver fat measured by MRI-PDFF can be identified two distinct trajectories after surgery, which suggest that the noninvasive measurement be useful to quantitatively differentiate the significant histological discrepancies in NASH resolution.

O-35

BARIATRIC SURGERY REDUCES MAJOR ADVERSE KIDNEY EVENTS IN PATIENTS WITH CHRONIC KIDNEY DISEASE: A MULTIPLE-LINKED DATABASE ANALYSIS IN A UNIVERSAL HEALTHCARE SYSTEM

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Background

Bariatric surgery has been shown to significantly reduce risk factors of metabolic syndrome. However, whether surgery can reduce mortality and improve renal function, especially in patients with established chronic kidney disease (CKD), remains poorly understood.

Objectives

To determine the association between bariatric surgery and major adverse kidney events among patients with CKD and severe obesity.

Methods

This retrospective, population-based cohort study included patients with CKD (at least stage 2 CKD with estimated glomerular filtration rate (eGFR) less than 90ml/min/1.73m²) and BMI \geq 35 who underwent bariatric surgery from January 2010 to December 2022 in Ontario, Canada. Multiple-linked administrative databases were used to define confounders, including baseline age, sex, BMI, eGFR, comorbidities, duration of diabetes diagnosis, healthcare utilization (cancer screening, hospitalizations, specialist visits), socioeconomic status, and smoking or substance use. Non-surgical control group patients were identified from a linked primary care medical record database. The primary outcome was major adverse kidney events (MAKE) which includes composite of all-cause mortality, new initiation of dialysis, decline of eGFR by 50% compared to baseline, and admission to hospital with acute kidney injury, myocardial infarction, or heart failure. Secondary outcomes were individual components of the composite outcome and cause-specific mortality. Outcomes were evaluated through a multivariable adjustment.

Results

2,471 CKD patients (mean 60.13 years [SD 8.34], 58.4% women) were included, with 564 surgical patients and 1,907 non-surgical controls and a median follow-up time of 7.6 years. In the surgery group, 78 patients (13.8%) died, compared with 511 patients (26.8%) in the control group (adjusted hazard ratio [HR] 0.50, 95%CI, 0.39-0.62). Bariatric surgery was associated with 24% lower hazards of major adverse kidney events than controls (adjusted HR 0.76, 95%CI 0.48-0.88). Specifically, bariatric surgery was associated with lower hazards of new initiation of dialysis, decline of eGFR by 50% compared to baseline, and admission to hospital with acute kidney injury, myocardial infarction, or heart failure. Bariatric surgery was also associated with lower cardiovascular and cancer mortality.

Conclusion

Bariatric surgery was associated with substantially lower major adverse kidney events, as well as all-cause, cardiac, and cancer mortality in patients with CKD and severe obesity.

O-36

BARIATRIC SURGERY-INDUCED EPIGENETIC CHANGES: MIRNA AND METABOLOMIC PROFILING IN PEOPLE WITH OBESITY, TYPE 2 DIABETES MELLITUS, AND PREDIABETES

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Background

Metabolic surgery is an effective modality for treating people with obesity and its related metabolic disorders, including type 2 diabetes mellitus. However, there is a lack of understanding regarding the molecular mechanisms that underpin the clinical improvements observed following these surgeries. Recent studies suggest that epigenetic changes may contribute to this clinical and metabolic improvement.

Objectives

The principal focus of our research is to explore the epigenetic alterations that occur following metabolic surgery in three different groups: people with obesity, people with obesity and type 2 diabetes mellitus, and people with obesity and prediabetes. We aim to study the effects of metabolic surgery on body composition, glycated hemoglobin (HbA1c), hormones, adipokines, and inflammatory cytokines at baseline, 6, and 12 months post-surgery in subjects with obesity with different diabetes statuses. We also aim to assess the level of miRNA pre- and post-surgery and the gene expressions of adipose tissue involved in inflammation, glucose, and lipid metabolism. Finally, we aim to determine the relationship of lifestyle and dietary practices with clinical outcomes and the ¹HNMR-metabolic fingerprint and dietary patterns associated with type 2 diabetes mellitus and prediabetes before and after surgery.

Methods

Our study included 102 patients who underwent metabolic surgery, from whom we obtained blood samples at baseline, 6, and 12 months post-surgery. The main parameters measured in this study include anthropometric data, body composition analysis, biochemical parameters, miRNA levels, adipose tissue gene expressions, dietary patterns, and metabolomic profiles. After an overnight fast, blood samples were taken for HbA1c, liver, renal, and lipid profiles, hormones, and adipokines, as well as metabolomic analysis. miRNA was also extracted from the plasma collected.

Results

We observed significant changes in anthropometric and body composition analysis data, dietary pattern, biochemical markers, miRNA expression, and metabolite production after the post-operative phase, specifically among people with obesity-related diabetes or prediabetes.

Conclusion

Our results suggest that epigenetic modifications relevant to insulin signaling pathways alongside glucose metabolism change are being demonstrated through these variations following metabolic surgery. These discoveries offer valuable comprehension of the biomolecular processes that bring about positive clinical outcomes from metabolic surgery. These insights could also be utilized to assist in the development of predictive biomarkers of type 2 diabetes mellitus.

O-37

BEST SUPPORTIVE CARE FOR PATIENTS WITH COMPLEX OBESITY

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Background

Surgery remains the most effective treatment for obesity, however it may not be available, acceptable, or appropriate for a significant proportion of patients. Effective alternatives to surgery were previously limited and did not provide comparable outcomes in most patients, this has changed recently. There is no readily available data on the number of patients referred to Tier 3 and 4 weight management services in England and Wales, or what proportion of those referred undergo surgery. With approval of effective pharmacotherapy to be used in weight management services in the UK it is important to understand how many patients could stand to benefit from multimodal treatment.

Objectives

Identify the group of patients who do not receive bariatric surgery following referral to a tertiary bariatric service in the UK. Highlight the potential for undertreatment of obesity in these patients.

Methods

Single centre analysis of prospectively collected data to identify patients referred to a tertiary bariatric service over a six-year period (April 2010–December 2016).

Results

1266 patients were referred to the bariatric service. 4 were excluded due to missing data. 604 patients (47.8%) received laparoscopic bariatric surgery and 34 (2.7%) an intragastric balloon. 624 patients (49.4%) had no surgical or endoscopic intervention.

Table 1. Treatment outcomes of new referrals to Bariatric service.

Therapeutic outcome	Procedure type	No. of patients (%)
Surgical procedure	Gastric band	260
	Sleeve gastrectomy	142
	Roux-en-Y gastric bypass	115
	Band revision/removal/port revision	87
	Total Surgical procedures	604 (47.8%)
Endoscopic procedure	Intragastric balloon	34 (2.7%)
No intervention		624 (49.4%)

Conclusions

Almost half of patients referred did not receive surgical or endoscopic treatment, representing a significant number who should be considered for alternative treatment modalities. With the increasing availability of effective pharmacotherapy and endoscopic treatments, there is a growing opportunity for weight management MDTs to adopt the model of care established within cancer services, providing best supportive treatment to those not having surgery. We have a duty of care to provide for patients referred to weight management services, including those who do not undergo surgery.

O-38

BEST WEIGHT LOSS MODEL AFTER STANDARD BARIATRIC SURGERY FOR MORBIDLY OBESE PATIENTS IN KOREA

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Background

Since national insurance coverage started for bariatric surgery in Korea, laparoscopic sleeve gastrectomy (LSG) and Roux-en Y gastric bypass (LRYGB) are main bariatric procedures now. There is increasing demand on which assesses the effect of bariatric surgery, such as excess body weight loss (EWL) and total weight loss (TWL), and even on which predicts the effect of bariatric surgery.

Objectives

This study aimed to evaluate feasibility and 1-year weight loss outcomes of these two procedures in Korean morbid obese patients after national insurance coverage and find out which of these two criteria is better by validating previous weight loss predicting models .

Methods

Between 2019. Jan. and 2022. Jun., a retrospective data of morbid obesity patients who underwent either LSG or LRYGB from 4 hospitals was analyzed. Primary endpoint was 1-year follow up data of weight loss. Secondary endpoints included to find any risk factors affecting whether either 50% or more EWL or 25% or more TWL was achieved and to validate two different weight loss models using our data.

Results

A total of 137 patients were collected in the period. 76 patients underwent LSG and 62 patients underwent LRYGB. Mean age was significantly higher in patients who underwent LRYGB than LSG (47.3 ± 10.9 vs. 40.7 ± 12.0 , $P < 0.001$). Preoperative BMI was higher in patients who underwent LSG (39.8 ± 6.9 vs. 36.4 ± 5.1 , $P < 0.001$). significantly more patient underwent LRYGB. BMI was the only independent risk factor of hindering from achievement of 50% or more EWL (OR = 0.830, 95% confidence interval(CI) 0.764-0.902), whereas TWL was not affected by BMI (OR =1.010, 95% CI 0.957-1.065). External validation using Baltasar's model using BMI showed highest accuracy (adjusted R^2 , 71.3%), whereas lesser BMI difference was predicted in Seyssel's model using TWL.

Conclusion

Both laparoscopic LSG and LRYGB were feasible and effective bariatric procedures for successful weight loss morbid obese patients in Korea. EWL and TWL proved to be similar trends for the success of 1-year weight loss. TWL model appeared to be a criterion that could more accurately predict weight loss without being affected by preoperative weight.

O-39

BILIO-PANCREATIC LIMB LENGTH AND CHANGE IN HbA1c IN DIABETIC PATIENTS AFTER MGB-OAGB, A 14 YEARS FOLLOW UPK S Kular*Kular College & Hospitals P. Ltd, Bariatric & Metabolic Surgery, Khanna, India***Background**

There is now enough evidence that MGB-OAGB (Mini-One Anastomosis Gastric Bypass) improves type-2 diabetes (DM), but length of the biliopancreatic limb (BPL) is still controversial.

Objective

The purpose of this study was to analyze the association of a “Tailored” BPL with the HbA1c changes (Delta HbA1c) at 1, 5, 10 & 14 years after Mini-Gastric Bypass-Original Technique (MGB-OT.)

Methods

HbA1c data was collected in DM patients operated for MGB-OT with a tailored BPL from Feb 2007 to Feb 2009 & followed up at 1, 5, 10 & 14 years up to Feb 2023 and analysed. HbA1c level of less than 7% was used as the critical outcome measure in this study.

Results

113 diabetics (operated till Feb 2009) were followed post MGB-OT with follow up of 89 patients complete at 10 & 75 at 14 years. The mean preoperative HbA1c was 9.16 \pm 1.60 range 6.8 - 14.7, the mean 1 yr HbA1c declined to 5.50 \pm 0.36 range 4.7 - 6.4, 5 yr HbA1c 5.65 \pm 0.35 range 4.6 - 7, 10 yr HbA1c 5.82 \pm 0.41, range 4.7 - 7.6 and 14 yr HbA1c 5.90 \pm 0.62, range 4.6 - 7.8. Of the 113 patients evaluable at 1 year, 108 patients at 5 years, 89 patients evaluable at 10 years & 75 at 14 yrs. 100%, 100%, 98.9% 96.8% had HbA1c levels <7% respectively. Per protocol a longer BPLL was selected for patients with higher pre op HbA1c levels (regression model: $y = -14 + (23 * x)$, correlation coefficient $r = 0.97$.) The mean change (“Delta”) in HbA1c at 1, 5, 10 & 14 years was significantly associated with BPLL. The mean 10 yr Delta HbA1c (PreOp - 14 yr) was -3.26 \pm 2.10. The BPLL was highly correlated and linearly related to the 14 yr Delta HbA1c (regression model $y = -0.38 + (0.02 * x)$, correlation coefficient (r): 0.8.)

Conclusions

At 14 years 96.9% of MGB-OT patients had HbA1c <7%. The tailored BPLL showed a strong linear relation between BPLL and the Delta HbA1c levels at 1, 5, 10 & 14 years.

O-40
BRIGHT GREEN BREAKTHROUGH: THE FLUORESCENT TOOL REVOLUTIONIZING IN REVISIONAL BARIATRIC SURGERY

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Introduction

Indocyanine Green (ICG) is a fluorescent dye widely used in various medical applications, including the identification of vascular structures and tissue perfusion. In revisional bariatric surgeries, ensuring adequate perfusion is critical to prevent postoperative complications. This study presents 4 cases of revisional bariatric surgery performed due to gastroesophageal reflux, in which ICG was utilized to evaluate its effectiveness and safety. All patients had previously undergone laparoscopic sleeve gastrectomy.

Methods

A retrospective review of 4 patients who underwent revisional bariatric surgeries using ICG was conducted. Patient characteristics, type of surgery performed, tissue perfusion detection with ICG, and postoperative complications were assessed. The standard ICG dose of 0.5 mg/kg was administered for tissue perfusion assessment in all cases. In all patients, ICG was used to evaluate perfusion following the gastrojejunal and jejunojejunal anastomoses as seen in Figure 1 and Figure 2. In one case, ICG was also utilized to assess the stomach section area before performing the gastrojejunal anastomosis.

Results

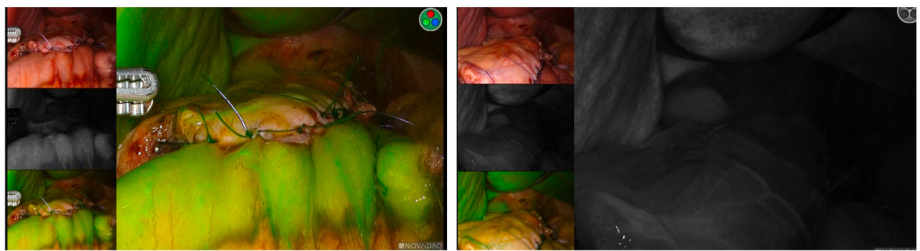
All 4 patients had previously undergone laparoscopic sleeve gastrectomy as their sole bariatric procedure. With the use of ICG, good perfusion was demonstrated in all cases, and no complications were encountered during the postoperative period. The average time for visualization of perfusion with ICG was 20-30 seconds, and the duration of this visualization was 10-20 seconds before disappearing. Patients were followed up to 12 months postoperatively without any issues. The use of ICG allowed for safe assessment of tissue perfusion during surgery.

Conclusion

The use of Indocyanine Green in revisional bariatric surgery appears to be a valuable tool for assessing tissue perfusion, leading to better surgical decision-making and potentially reducing postoperative complications. While ICG technology has existed for years, it is time for it to be more widely adopted as a tool in complex or high-risk cases where complications may be more likely.

Figure 1

Case A. Gastrojejunal anastomosis perfused with green light.

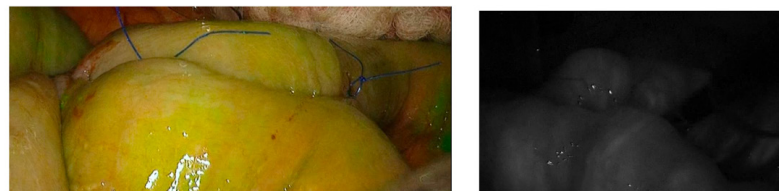


Case B. Jejunojejunal anastomosis perfused with ICG.

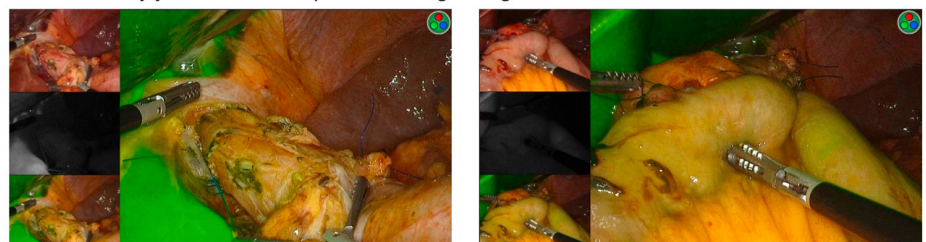


Figure 2

Case C. Gastrojejunal anastomosis perfused with green light.



Case D. Gastrojejunal anastomosis perfused with green light.



O-41**CHALLENGES IN MANAGING ABDOMINAL WALL HERNIA WITH OBESITY**

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Morbidly obese patients have four times more likely to have recurrence than non obese

The challenges may be:

- Higher intraabdominal pressure
- Increase risk of SSI & SSO
- Higher rate of associated co-morbid conditions & complication
- Technical challenge of surgery
- Excessive adipose tissue
- Poor vascularity
- Large potential subcutaneous tissue
- Insulin resistance

Factors in determining operative approach to morbidly obese patients to hernia

- BMI
- Absolute Diameter of defect
- Surface area of defect compared to surface area of abdominal wall
- Body morphology of the patient (android/Gynecoid/ovoid)
- Distribution of fat (Visceral vs Subcutaneous)
- Number of previous recurrences/intended technique
- Mesh location/history of contamination
- Choice of Mesh

Video inclusion

- IPOM PLUS in Obese
- eTEP Rives Stopa / TAR in Obese
- Lateral Hernia in Obesity
- Transabdominal Retromuscular Repair in Obese
- Open Tar in Obese

O-42

CHANGES IN 24-HOUR MOVEMENT BEHAVIORS AFTER METABOLIC AND BARIATRIC SURGERY AND THEIR ASSOCIATIONS WITH WEIGHT LOSS: AN ACTIGRAPHY STUDY

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Background

Emerging research suggests that how individuals distribute their time between movement behaviors across the 24-hour day (physical activity [PA], sedentary time [ST], and sleep) has important health implications. Accordingly, several countries have adopted 24-hour movement guidelines for a “healthy day.” While substantial research has examined the importance of PA in relation to weight loss after metabolic and bariatric surgery (MBS), less is known about sleep and ST. Data on the extent to which 24-hour movement behaviors change after MBS are also lacking.

Objectives

The current study is the first to evaluate changes in objectively measured 24-hour movement behaviors during the first year after MBS and their associations with percent weight loss (%WL).

Methods

Participants (n=73, M_{age} =44.1 years, baseline M_{BMI} =45.8 kg/m², 89% female) wore a wrist-worn accelerometer 24 hours/day for 7 days pre- and 3-, 6-, and 12-months post-MBS. Average minutes per day for the following 24-hour movement behaviors were computed: light PA, moderate-to-vigorous PA (MVPA), total PA (light PA + MVPA), ST, and sleep. Mixed models assessed changes in each 24-hour movement behavior and associations with %WL, when controlling for surgery type, anthropometric/sociodemographic factors, and accelerometer wear time.

Results

Participants on average demonstrated favorable changes in sleep time and ST at 6- and 12-months post-MBS versus pre-MBS (p 's<.05; i.e., +25 and +50 minutes/day of sleep and -31 and -41 minutes/day of ST at 6-months and 12-months post-MBS, respectively). While PA did not change, greater light PA and total PA time (but not MVPA, sleep, or ST) related to greater %WL, especially at 6-months (p 's<.05), with a 100 minute/day increase in each relating to ~1.0 greater %WL.

Conclusion

Patients demonstrated moderate improvements in sleep and ST after MBS. Although these changes were unrelated to %WL, future research should investigate their potential positive impact on other health outcomes consistent with a “whole day” approach to improved health. Consistent with prior research, average changes in PA were minimal. However, the observed associations between light and total PA with %WL highlight the potential utility of encouraging patients to increase all types of movement, not just MVPA.

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CHANGES IN GUT MICROBIAL FLORA AFTER ROUX-EN-Y GASTRIC BYPASS AND SLEEVE GASTRECTOMY AND THEIR EFFECTS ON POST-OPERATIVE WEIGHT LOSS

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Introduction

Bariatric surgery affects gut microbial flora due to the anatomical and physiological changes it causes in the gastrointestinal tract. Understanding the interaction between the gut flora, type of bariatric surgery and weight loss may help improve bariatric surgery outcomes. This study was designed to compare the effects of Roux-en-Y Gastric Bypass (RYGB) and Sleeve Gastrectomy (SG) on two main phyla of the gut microbiota in humans and evaluate their potential effect on weight changes.

Materials and Methods

Thirty morbidly obese patients were divided into two groups and underwent laparoscopic SG or laparoscopic RYGB. The patients were evaluated for weight changes and fecal sampling was performed on them at baseline and six months after the surgery. A microbial flora count was carried out of the phyla *Bacteroidetes* and *Firmicutes* and *Bacteroides Fragilis*. Changes in the abundance of the flora and their correlation with weight loss were analyzed.

Results

After six months, the patients with a history of RYGB showed a decrease in stool *Bacteroidetes*, with a non-significant reduction in the SG group. *Firmicutes* abundance was almost unchanged following SG and RYGB. There was no significant change in *Bacteroides Fragilis* abundance in either of the two groups, but a positive correlation was observed between *Bacteroides Fragilis* and weight loss after SG and RYGB.

Conclusion

Bariatric surgery can affect the gut microbiota. It can be concluded that these changes are dependent on many factors and may play a role in weight loss.

Keywords: Sleeve gastrectomy, Roux En Y gastric bypass, Microbial Flora, Weight.

O-44

CHANGES IN OESOPHAGEAL TRANSIT, MACRO-REFLUX EVENTS AND GASTRIC EMPTYING CORRELATE WITH IMPROVEMENTS IN GASTRO-INTESTINAL SYMPTOMS AND FOOD TOLERANCE EARLY POST SLEEVE GASTRECTOMY

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Background

There are significant alterations in gastro-intestinal function, food tolerance and symptoms following sleeve gastrectomy (SG). These change significantly over the first year, but it is unclear what the underlying physiological basis for these changes.

Objective

Using nuclear scintigraphy, we examined changes in oesophageal transit and gastric emptying and how these correlates with changes in gastro-intestinal symptoms and food tolerance.

Methods

Post-SG patients undertook protocolised nuclear scintigraphy imaging along with SF-36 quality of life and structured gastro-intestinal symptom scores at 6 weeks, 6 and 12 months.

Results

Thirteen patients were studied: mean age 44.8 ± 8.5 years, 76.9% female, pre-operative BMI 46.9 ± 6.7 kg/m². Post-operative % total weight loss was $11.9 \pm 5.1\%$ (6 weeks), $24.9 \pm 7.2\%$ (6 months) and $32.2 \pm 10.1\%$ (12 months), p-value <0.0001. A significant increase of meal was observed 10 minutes post-prandial within the proximal stomach; 22.3% (IQR 12%) at 6 weeks vs 34.2% (IQR 19.7%) at 12 months, (p-value 0.038). Hyper-accelerated transit into the small bowel decreased over time; 49.6% (IQR 10.8%), 50.1% (IQR 13.3%), 42.7% (IQR 20.5%), (p-value 0.022). Gastric emptying half-time significantly increased from 6 weeks 19 (IQR 8.5) minutes to 12 months 27 (IQR 11.5) minutes, (p-value 0.027). The incidence of deglutitive reflux of semi-solids significantly decreased over time; 46.2% (6 weeks) vs 18.2% (12 months), (p-value <0.0001). Reflux score of 10.6 ± 7.6 at 6 weeks vs 3.5 ± 4.4 at 12 months, (p-value 0.049) and regurgitation score of 9.9 ± 3.3 at 6 weeks vs 6.5 ± 1.7 , (p-value 0.021) significantly reduced.

Conclusions

These data demonstrate that there is an increase in the capacity of the proximal gastric sleeve to accommodate substrate over the first year. Whilst gastric emptying and hyper-accelerated transit remain rapid, these reduce over time. This correlates with improved food tolerance and reduced reflux symptoms and appears to be the likely physiological basis for the changes in symptoms and food tolerance observed early post-SG.

O-45

CLASS IV OBESITY: AN OVERVIEW OF A NEW REALITY

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Background

Bariatric and metabolic surgery (BMS) is an established safe, effective, and durable treatment for obesity and its complications. New paradigms and evolution on society diets and lifestyle lead to increasing number of people diagnosed with severe obesity, especially those with class IV obesity (body mass index (BMI) $\geq 50\text{kg/m}^2$).

Objectives

This study aimed to evaluate the treatment given to class IV obesity patients as well as the outcomes of BMS in weight loss in those patients.

Methods

This study retrospectively collected records from a Portuguese tertiary Hospital data records of patients with a BMI $\geq 50\text{ kg/m}^2$ undergoing surgery between January 2018 and June 2022.

Results

A total of 27 patients who underwent BMS had BMI $\geq 50\text{ kg/m}^2$, of which 17 (63%) were women. All of them (100%) accomplished at least one year of diet and 25.9% had pharmacological treatment of obesity. The median BMI was 56.8 kg/m^2 (50.1-66.4). The majority (11; 40.7%) underwent Roux-en-Y gastric bypass, 6 (22.2%) sleeve gastrectomy, 2 (7.4%) mini-bypass and 8 (29.6%) single-anastomosis duodeno-ileal (SADI-S). All of them were laparoscopic without the need to convert. The median of excessive weight loss (EWL) at 1 month was 24.6% (9.2-57.7%), at 6 months was 56.1% (40.3-87.5%) and at 1 one year was 73.4% (55.1-109.8%)

Conclusion

Traditional BMS are applicable even in patients with class IV obesity with good results. More studies are needed to compare different approaches on weight loss and improvement in co-morbidities.

O-46

CLOSURE OF MESENTERIC DEFECTS IN TWO LAYERS REDUCES CHANCE OF REOPENING AFTER LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS SURGERY

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Background

Internal herniation (IH) is a common problem after laparoscopic Roux-en-Y gastric bypass surgery (RYGB). Routine closure of the mesenteric defects (MD's) reduces the risk of IH. Only very few articles report on risk factors for IH or describe detailed closing technique. There is no consensus yet on the best closing method.

Objective

To determine the optimal stapling method for closure of MD's after RYGB.

Methods

All performed RYGB procedures in our high volume bariatric institute were included. Quality of the closure was scored in the categories *poor*, *sub-optimal* and *optimal*, to see if the quality of the closure would predict chance of reopening of the MD's and therefore chance of IH. During any type of laparoscopy in the follow-up of the patient, the conditions of the MD's were stated. For example during diagnostic laparoscopy in symptomatic patients suspicious for IH or during laparoscopic cholecystectomy.

Results

Technically well executed closures with two rows of staples reduce the risk of reopening of Petersen's space (PS) in comparison to closure in one row (odds ratio, 0.316; 95% confidence interval [0.106-0.945], p=0.039). Not optimally performed closure of the MD's poses a risk of IH.

Conclusion

Our classification provides a quality assessment of MD closure during RYGB and gives insight in how to optimize surgical technique. This could be a first step in the development of a guideline for closure of the MD's with a stapling device.

O-47

COMPARISON OF THE METABOLIC EFFECTS OF BIPARTITION TRANSIT (BPT) AND SINGLE ANASTOMOSIS DUODENO-ILEAL BYPASS (SADI-S) CONVERSION IN A MINIPIG MODEL

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Introduction

Sleeve gastrectomy (SG) is the most common bariatric procedure despite an important rate of revision surgery, up to 20% at 10 years. New surgical techniques are being evaluated in France, including Sleeve Gastrectomy with Transit Bipartition (BPT) and Single anastomosis duodeno-ileal bypass with sleeve (SADI-S). These techniques would provide significant weight loss and comorbidities improvement by adding malabsorption and incretin secretion, especially for patients who already had a sleeve gastrectomy procedure (SG). However, physiological mechanisms underlying their efficacy remain not fully elucidated and have never been compared in a large mammal model.

Aim

To reproduce a large mammal model of SG, BPT and SADI-S and analyze the mechanisms underlying weight loss and type 2 diabetes improvement.

Methods

Twenty-four adult, female minipigs were randomized into four groups (laparotomy): control, SG, BPT and SADI-S. Postoperative metabolic evaluation was performed during a standardized three hours mixed-meal test by repeated measurement of blood glucose, insulin, D-xylose, and GLP-1.

Results

No animals died prematurely during the study. At 1 month after surgery, only the BPT group showed a significant decrease in postoperative food intake ($p=0.04$), however the mean percentage of weight loss was 3.1%, with no statistically significant difference between the SG, BPT, and SADI-S groups ($p > 0.95$). Fasting and postprandial blood glucose levels did not differ significantly between groups ($p=0.7$ and $p=0.3$ respectively). Fasting GLP-1 secretion was significantly increased in the SADI-S group compared to the other groups ($p<0.05$). After a standardized mixed-meal, there was a similar increase ($p>0.99$) of postprandial GLP-1 in the BPT and SADI-S groups compared to the control and the SG groups ($p<0.01$ and $p<0.01$). There was a significant decrease in D-xylose absorption in the BPT and SADI-S groups compared to the control and the SG group ($p<0.01$ and $p=0.03$ respectively) with no difference between groups.

Conclusion

In a minipig model, we showed that the persistence of nutrient transit through the duodenum combined with intestinal diversion of BPT did not significantly decrease GLP-1 secretion or malabsorption compared to SADI-S. Clinical validation of these results would allow a personalized surgical approach and optimization of the benefit-risk balance after SG.

O-48

COMPARING THE EFFECTS OF LAPAROSCOPIC SLEEVE GASTRECTOMY AND ROUX-EN-Y GASTRIC BYPASS SURGERIES ON DIETARY HABITS: THE ASIAN CONTEXT

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Background

bariatric surgery is a widely used treatment option for obesity, with significant benefits for weight loss and improvement in co-morbidities. However, little is known about the changes in dietary habits between Laparoscopic Sleeve Gastrectomy (LSG) and Roux-en-Y Gastric Bypass (RYGB) among the Asian population before and after the procedure. Understanding dietary habits between these groups after bariatric surgery is essential for optimising long-term outcomes.

Objectives

To investigate changes in dietary habits among Asian patients who underwent LSG and RYGB before and after surgery. This study also determines the correlation between dietary habits and weight loss outcomes after bariatric surgery.

Methods

A prospective cohort study was done on LSG patients (n=25) & RYGB (n=25) patients assessing the food frequency (FF), food habits (FH) and dietary intake using validated questionnaires at baseline, 6- and 12 months post-operation. Anthropometric data were measured respectively.

Results

LSG and RYGB do not differ much in FF at baseline. Compared to the baseline, there is a significant improvement in FF and FH in both LSG and RYGB following six months after surgery. About 80% of patients had satisfactory eating habits in both procedures. However, at 12 months, we noticed an increase in energy intake and the uptake of high-fat, high-sugar, and unhealthy food choices in LSG and RYGB, respectively. This study also suggested that food habits negatively correlate with weight and BMI in LSG and RYGB.

Conclusion

There is no significant difference in dietary habits between LSG and RYGB at 6- and 12 months post-operation. However, there is a significant increase in energy intake, FF and FH in both procedures at 12 months which negatively correlates to weight loss. The study outcomes show a substantial change in dietary habits in both types of bariatric surgery, information which medical professionals can use to anticipate potential post-operative problems to mitigate them through diet counselling strategies and assist patients in changing to healthier eating patterns following surgery in optimising long-term outcomes of bariatric surgery.

O-49

COMPARING THE SAFETY AND EFFICACY OF SLEEVE GASTRECTOMY VS. ROUX-EN Y GASTRIC BYPASS IN ELDERLY (>60 YEARS) WITH SEVERE OBESITY

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Background

Today, bariatric surgeons face the challenge of treating older adults with class III obesity. The indications and outcomes of Roux-en-Y gastric bypass (RYGB) versus sleeve gastrectomy (SG) also constitute a controversy.

Methods

PubMed, Web of Science and Scopus were searched to retrieve systematic reviews/meta-analyses published by March 1, 2022. The selected articles were qualitatively evaluated using A Measurement Tool to Assess systematic Reviews (AMSTAR).

Results

Six meta-analyses retrieved from literature were included in an umbrella review. The risk of early- and late-emerging complications decreased by 55% and 41% respectively in the patients undergoing SG compare to RYGB. The chance of the remission of hypertension and obstructive sleep apnea increased by 43% and 6% respectively and contrary the remission of type-2 diabetes mellitus (T2DM) decreased by 4% in RYGB compared to SG. RYGB also lead to increased excess weight loss (EWL) by 15.23% compared to SG.

Conclusion

Lower levels of mortality and early- and late-emerging complications were observed in the older adults undergoing SG than in those receiving RYGB, which was, however, more efficient in term of weight loss outcomes and recurrence of obesity-related diseases

O-50
COMPARISON OF 5 YEAR WEIGHT LOSS OUTCOMES OF PRIMARY OAGB AND REVISION OAGB AFTER LSG, A SINGLE SURGEON STUDY

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Background:

One Anastomosis Gastric Bypass (OAGB) is becoming popular as a primary procedure, with acceptable long-term weight loss outcomes. However long-term outcomes of revision OAGB and its comparison with primary are not yet well studied. This study compares weight loss outcomes of Primary OAGB (PGB) and Revision OAGB (RGB) at 1 and 5 years.

Objective

Compare only weight loss outcomes of PGB and RGB.

Methods

Retrospectively analysis of prospectively collected data of PGB and RGB, performed by single surgeon, from January 2012 to December 2018, was evaluated statistically and compared. Weight, BMI was compared at base line, 1 year and 5 years for both groups. This study focuses only on weight loss outcomes, since it is a predictor of many comorbidities.

Results

PGB 74 and 35 RGB, M:F 35:39 and 15:20, Age 14 to 73 years. There is no significant difference between Mean weight at Baseline prior to OAGB Surgery (p -value > 0.05). Mean (SD) of Baseline weight for PGB Group is 110.29 (21.58) and for RGB is 111.09 (28.01). Mean baseline BMI 40.60 and 40.63 respectively. The Mean (SD) for 1st year for PGB is 74.92 (14.88) and for RGB 84.38 (24.04). There is significant difference between Mean weight at 1 year. There is significant change in weight at 1 year for PGB (p -value < 0.05). At 5 year, there is no significant difference between mean weight in PGB and RGB (p -value > 0.05). Mean (SD) for PGB is 80.80 (17.14) and for RGB is 91.51 (29.12). There is significant difference in percentage (%) change in weight loss at 1 year and at 5 years in PGB and RGB groups- 31.79 and 26.85 for PGB , 21.64 and 15.64 for RGB, while the % BMI loss at 1 and 5 years for PGB is 21.64 and 15.64 for PGB and 25.18 and 14.59 for RGB. So the Mean Percentage change is significantly more in PGB than RGB group.

Conclusion

Both PGB and RGB are effective for weight loss up to 5 years. However, weight loss outcomes are better with PGB and RGB. Further and larger studies necessary.

O-51

COMPARISON OF THREE DIFFERENT ANASTOMOTIC METHODS OF SLEEVE GASTRECTOMY WITH TRANSIT BIPARTITION USING AN OBESE RODENT MODEL

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Background

The long-term effects and safety of single-anastomosis sleeve ileal (SASI) bypass have not been confirmed. The one anastomosis procedure carries the risk of bile reflux, and Braun anastomosis has the capacity to reduce bile reflux.

Objective

To compare the results of weight loss effect, diabetes remission and most important bile reflux of the sleeve gastrectomy with transit bipartition (RYTB), SASI bypass and SASI bypass with Braun anastomosis (BTB).

Methods

Obese Sprague-Dawley rats underwent RYTB (n=12), SASI (n=12), BTB (n=12), esojejunostomy (EJ) (n=12), and SHAM (n=8) surgery. During the 12-week follow-up period, weight changes, glucose improvement, and changes in serum nutrition were evaluated. Histological expression and bile acid concentration in the gastroesophageal junction of rats in all groups were also evaluated.

Results

No significant differences in weight loss and glucose improvements were observed in the RYTB, SASI, and BTB groups. The RYTB and BTB groups had significantly lower bile acid concentration and albumin levels than the SASI group. In addition, mucosal height in the RYTB and BTB groups was significantly lower than in the SASI group.

Conclusion

Braun anastomosis had a significant effect on anti-reflux. BTB may be a superior primary procedure due to its potential for parallel bariatric and metabolic improvements, effective anti-reflux effects, simplified operations, and avoidance of severe malnutrition. Further clinical studies are needed to confirm these findings.

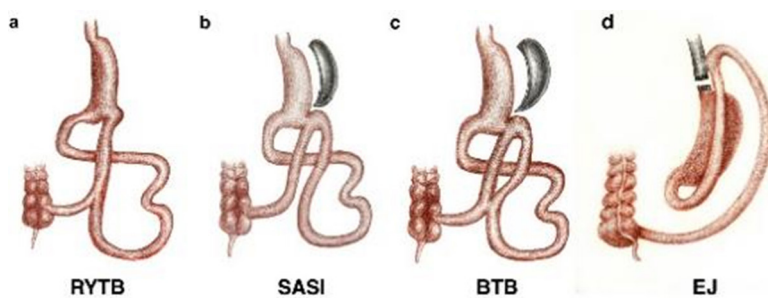


Figure 1. Surgical intent of each group.

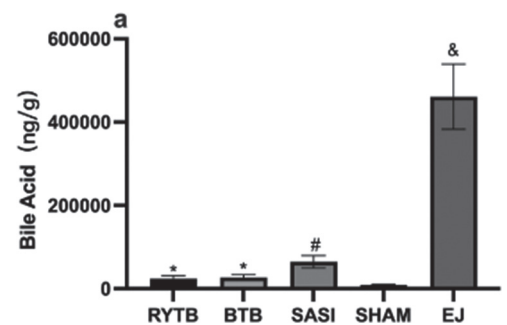


Figure 2. Bile acid concentration.

O-52

COMPARISON OF WEIGHT LOSS OUTCOMES BETWEEN ENDOSCOPIC REVISION OF ENDOSCOPIC SLEEVE GASTROPLASTY AND LAPAROSCOPIC SLEEVE GASTRECTOMY

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Background

Laparoscopic sleeve gastrectomy (LSG) has become the most performed bariatric surgical procedure in the United States, involving the resection of the greater curvature and fundus of the stomach, leading to tubulization of the gastric pouch. Endoscopic sleeve gastroplasty (ESG) was developed as a less invasive alternative to LSG and creates a similar gastric tubulization through endoscopic placement of full-thickness sutures. All surgical and endoscopic bariatric-metabolic procedures are prone to weight regain, often attributed to pouch and gastric outlet dilation. Endoscopic retightening of LSG (ER-LSG) and ESG (R-ESG) is an emerging option for management of pouch dilation. In this study, we compare weight loss outcomes between endoscopic revisions in patients who have undergone LSG compared to those with prior ESG.

Methods

We retrospectively reviewed adult patients who underwent endoscopic revisions for LSG and ESG at a single academic center. We excluded patients who underwent these procedures for indications other than weight recurrence, had other obesity-related surgeries/procedures within a year of the procedures, or those with active malignancy and/or pregnancy. Total body weight loss percentage (%TBWL) at 1, 3, 6, and 12 months was calculated based on baseline weight at procedure. All continuous data are summarized as the mean and standard deviations (SD). Independent t-tests were conducted to compare %TBWL between the groups.

Results

Of the 39 patients included in this analysis, 19 underwent ER-LSG and 20 underwent R-ESG. Baseline characteristics were 80% female, 84% white, and mean age of 51 at initial bariatric procedure. Total weight regain % after initial bariatric procedure was 31.4% and 11.9% after ER-LSG and R-ESG respectively. Outcomes at 1, 3, and 6 months were not significantly different, however, at 12 months ER-LSG was associated with a significantly higher %TBWL compared to R-ESG (12.6 ± 8.6 vs. 3.6 ± 6.1).

Conclusion

Endoscopic revision of both endoscopic and laparoscopic sleeve gastroplasty/gastrectomy is an effective, minimally invasive, and safe option for the management of weight recurrence, with a more pronounced effect in %TBWL in the revision of LSG.

Table 1. Weight loss outcomes by procedure.

	ER-LSG (19)	R-ESG (20)	p-value
%TBWL 1 month (26)	6.8 ± 2.3 (15)	6.3 ± 3.4 (11)	0.723
%TBWL 3 months (18)	10.6 ± 6.2 (10)	7.1 ± 2.7 (8)	0.186
%TBWL 6 months (20)	9.6 ± 5.0 (11)	8.2 ± 6.2 (9)	0.570
%TBWL 12 months (20)	12.6 ± 8.6 (10)	3.6 ± 6.1 (10)	0.015*

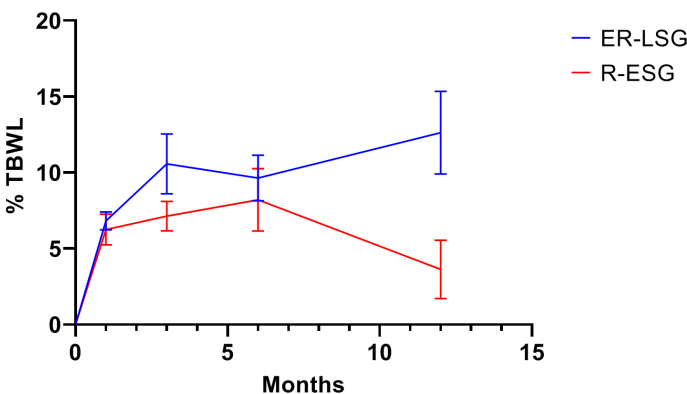


Figure 1. %TBWL ± SEM after endoscopic revisional procedures.

O-53

**CONCOMITANT HIATAL HERNIA REPAIR WITH SLEEVE GASTRECTOMY:
IMPACT ON GASTROESOPHAGEAL REFLUX?**

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Background

Hiatal hernia (HH), whenever encountered during sleeve gastrectomy (SG), needs to be addressed due to its strong association with gastroesophageal reflux disease (GERD). However, the mid to long-term effects of hiatal hernia repair (HHR) on GERD remains uncertain.

Objective

To determine the impact of SG + HHR on GERD.

Methods

It is a cross-sectional observational analysis of patients who underwent SG with concomitant HHR from April 2013 to July 2021 and had completed at least 1-year of follow-up. Preoperative data were retrieved from a prospectively maintained database. Out of 590 patients who underwent SG, sixty-three patients (10.7%) with concomitant HHR were recruited and assessed for use of PPIs (Proton Pump Inhibitors) and symptoms of GERD using the GERD-Q questionnaire.

Results

Of 63 patients, 11 were lost to follow-up, and one underwent Roux-en-Y gastric bypass for HH recurrence and severe reflux. The remaining fifty-one patients were assessed at a mean follow-up of 3.7 ± 2.0 years. Of these, 51% (26/51) patients had preoperative reflux symptoms. On follow-up, 69.2% (18/26) had complete resolution with significant improvement in their GERD-Q scores (9.8 ± 3.1 to 6.5 ± 2.1 ; $p = 0.001$), while 76.2% (16/21) of patients were off the PPIs. The incidence of de novo GERD was found in 20% (5/25) of the patients. The mean BMI improved from 44.4 ± 5.0 kg/m² to 33.2 ± 4.9 kg/m² ($p < 0.001$).

Conclusions

In patients of morbid obesity with HH, concomitant HHR with SG leads to improvement of the reflux symptoms in more than two-thirds of the patients besides alleviating the use of PPIs.

O-54
CONCOMITANT INCIDENTAL HIATAL HERNIA REPAIR WITH SLEEVE GASTRECTOMY: OUTCOMES

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Background

Sleeve gastrectomy (SG) is known to be associated with 10-30% de-novo occurrence of gastroesophageal reflux disease (GERD). There is an emerging consensus to look for a hiatal hernia at the time of SG and repair it if present to avoid postoperative GERD. In a series of SG with and without HH repair, a total of 97 patients who received SG+hiatal hernia repair; 55 of them were diagnosed with hiatal hernia intra-operatively, despite a full work up pre-operatively. This indicates the need for adequate inspection of the hiatus at the beginning of the operation.

Aim:

To describe the rate of incidental hiatal hernia during sleeve gastrectomy and to share the outcomes of its concomitant repair with sleeve gastrectomy.

Patients

60 patients were included in this retrospective study. All had GERD questionnaire and full preoperative work up and shown no hiatal hernia.

Results

8 cases had incidental hiatal hernia during sleeve gastrectomy despite preoperative work up and all were repaired before doing the sleeve. None of them had postoperative GERD.

Conclusion

Concomitant hiatal hernia repair with sleeve gastrectomy for incidental hiatal hernia found intra-operatively is safe and has good outcome regarding postoperative GERD symptoms.

O-55

CONCURRENT LAPAROSCOPIC SLEEVE GASTRECTOMY WITH UVULOPALATOPHARYNGOPLASTY IN THE TREATMENT OF MORBID OBESITY COMORBID WITH SEVERE OBSTRUCTIVE SLEEP APNEA: A RETROSPECTIVE COHORT STUDY

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Background

Obese patients often experience obstructive sleep apnea (OSA). However, the treatment efficacy of OSA is unsatisfactory in obese patients with tonsillar hypertrophy and elongated uvula. Bariatric surgery (BS) can effectively relieve obesity along with OSA in these patients. However, some patients have residual OSA after weight loss procedures. Concurrent uvulopalatopharyngoplasty (UPPP) with BS might be a treatment option for these patients. This study aimed to evaluate the safety and short-term effect of contemporaneous surgeries (BS plus UPPP) in the treatment of morbid obesity comorbid with severe OSA for the first time.

Methods

A retrospective cohort study was performed to identify patients with obesity and severe OSA who underwent laparoscopic sleeve gastrectomy (LSG) with or without UPPP surgeries between December 2017 and December 2020 in our center. Patients were divided into two groups according to different surgical methods (contemporaneous group [LSG with UPPP] vs LSG only group), and their demographics were collected. Treatment of all patients followed a perioperative management protocol developed by a multidisciplinary team, efficacy and surgical safety between the two groups was evaluated.

Results

A total of 101 patients were included in this study (contemporaneous group [LSG with UPPP], n=42 vs LSG only group, n=59). There was no significant difference in surgical safety between the two groups, while both OSA and weight loss were significantly improved after 12 months postoperative follow-up. The mean apnea-hypopnea index (AHI) decreased from 68.7±30.4/h to 10.2±7.0/h in the contemporaneous group ($P<0.001$) and from 64.7±26.2/h to 18.9±9.8/h in the LSG group ($P<0.001$). Overall, 50% of patients (21/42) in the contemporaneous group were cured of OSA, while only 13.5% in LSG group were cured ($P<0.001$). All patients in the contemporaneous group were considered to have been successfully treated for OSA, whereas only 69.5% in LSG group considered to be successfully treated ($P<0.001$).

Conclusions

Under the condition of scrupulous intensive care, contemporaneous surgery modalities (concurrent bariatric and UPPP surgeries) could be an effective option for selected obese patients with severe OSA.

Keywords: Obstructive sleep apnea, Bariatric surgery, Laparoscopic sleeve gastrectomy, Uvulopalatopharyngoplasty, Obesity.

O-56
CONSTRUCTING AND VALIDATING A DYNAMIC NOMOGRAM TO PREDICT RESPONSE TO BARIATRIC SURGERY: A MULTICENTER RETROSPECTIVE STUDY

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Background

Insufficient weight loss is one of the major problems for bariatric surgery, and constructing an individualized model for predicting the outcomes of bariatric surgery is essential for patients to make clinical decisions.

Objectives

The aim of this study is to develop a nomogram to predict the response to bariatric surgery.

Methods

The data of 509 people with obesity who underwent bariatric surgeries between 2019 to 2020 from 5 centers were retrieved and assessed. Multiple Imputation was used to replace missing data. Those cases fulfilling the following criteria: (1) $\geq 50\%$ EWL; (2) $\geq 35\%$ AWL; (3) $\geq 25\%$ TWL 1 year after bariatric surgery were classified as responders, while the others were non-responders. A web-based nomogram was constructed based on the training cohort, which included 365 patients from 3 centers. The validation cohort contained 144 patients from 2 centers and was used to validate the model. ROC curve, AUC and calibration curve were used to determine the predictive accuracy and discriminative ability of our constructed model.

Results

From the retrieved data, 119 (23.38%) cases were classified as non-responders, and they showed advanced age, lower pre-operative BMI, smaller waist, higher fasting glucose, higher HbAc, lower fasting insulin and higher triglyceride compared to responders. A forward LR logistic regression analysis indicated that young age (OR=0.963, 95% CI: 0.941-0.985, $p=0.001$), higher pre-operative BMI (OR=1.104, 95% CI: 1.064-1.146, $p<0.001$) and lower fasting glucose (OR=0.871, 95% CI: 0.805-0.942, $p=0.001$) were essential factors contributing to the response to bariatric surgery after 1-year of treatment. Lastly, a web-based nomogram was constructed to predict the success of bariatric surgery and demonstrated an AUC of 0.743 and 0.759 upon internal and external validation.

Conclusion

Age, BMI and fasting glucose were proved to be essential factors influencing the response to bariatric surgery. The nomogram constructed in this study demonstrated good adaptivity to help make clinical decisions.

O-57

CONTINUOUS GLUCOSE MONITORING TO INVESTIGATE CHRONIC ABDOMINAL PAIN AND GASTROINTESTINAL SYMPTOMS AFTER ROUX-EN-Y GASTRIC BYPASS

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Background

Chronic abdominal pain (CAP) and postprandial hypoglycemia are common after bariatric surgery. Both conditions can be related to enhanced motility in the duodenum and jejunum.

Objectives

The aim of this study was to explore the relationship between postprandial hypoglycemia and CAP in patients suffering from CAP after Roux-en-Y Gastric Bypass (RYGB), and the efficacy of Continuous Glucose Monitoring (CGM) as an educational tool to understand and reduce glucose fluctuations related to meals.

Methods

Twenty-two women who reported CAP (abdominal pain more than once a week) eleven years after RYGB used CGM (Freestyle Libre 2) for two 14-day periods with a diet intervention in between. The Gastrointestinal Symptom Rating Scale (GSRS) and the Dumping Severity Score (DSS) questionnaires were completed before and after the periods with CGM. The Freestyle Libre report define time below range (hypoglycemia); as glucose < 3.9 mmol/L (< 70 mg/dL) and above range; as glucose > 10.0 mmol/L (> 180 mg/dL).

Results

Mean±SD age was 54.6±7.7 years, and time since the RYGB 11±1.5 years. BMI at RYGB was 42.0±4.0 kg/m², and at follow-up 28.9±6.0 kg/m². The total GSRS score changed from 2.7±0.8 to 2.5±0.6, p=0.027, and DSS for early dumping changed from 9.6±4.5 to 7.0±5.2, p=0.025 during the study period. From the CGM report the number of hypoglycemic events first period were 12.2±12.7 vs 10.4±9.1 in the second period, p=0.299. Half of the patients (11/22) had less, three had unchanged, and eight patients had more frequent hypoglycemic events after the intervention. There was no difference in time above the glycemic range, time in range, or time below range before and after intervention, respectively 60±106 min/24h vs 28±37.5min/24h, p=0.355, 1303±129min/24h vs 1328.8±118.9min/24h, p=0.175, and 75±107min/24h vs 82±120 min/24h, p=0.669. All participants expressed benefit from participating in the study.

Conclusion

Reduction in hypoglycemic events measured with the CGM report seems to reduce gastrointestinal and hypoglycemic symptoms measured with GSRS and DSS. CGM may be useful as an educational tool for patients to relate symptoms to fluctuations in glucose. Further studies are needed to reveal the role of CGM in the bariatric surgery population.

CONTROL OF EATING ATTRIBUTES AND WEIGHT LOSS OUTCOMES OVER ONE YEAR AFTER SLEEVE GASTRECTOMY IN PEOPLE WITH SEVERE OBESITY

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Background

Sleeve gastrectomy (SG) is one of the most common bariatric metabolic surgeries performed worldwide with its frequency increasing. However, a complex interplay of different factors results in a great degree of variability in weight loss response to SG and prevents an accurate approximation of its effectiveness.

Objectives

Our study aimed to compare various control of eating attributes before and after SG depending on the achievement of optimal weight loss target at one-year post-SG.

Methods

We designed a prospective longitudinal pre-post cohort study using the Control of Eating Questionnaire (CoEQ), a validated visual analogue scale, pre-SG (baseline), and then at 3, 6, and 12 months post-SG. Total weight loss (TWL) of $\geq 25\%$ 12 months post-SG was set as an optimal weight loss target. We assessed differences in sex, age, baseline weight, BMI, smoking status and selected CoEQ scores between those who achieved the target and those who did not.

Results

We included 41 patients (80.5% females, mean age 41.7 ± 10.6) with the completed CoEQs at all four timepoints. Baseline characteristics were all comparable, outside of a “Desire for sweet foods” score that at baseline was significantly lower among those with $\geq 25\%$ TWL (44[0-90] vs. 75[9-100], $p=0.026$). At 3 months post-SG “Difficulty to control eating” score became significantly different between the $\geq 25\%$ TWL and $<25\%$ TWL groups (7[0-50] vs. 17[5-63], $p=0.042$), at 6 months – “Feeling of fullness” and “Frequency of food cravings” (79[42-95] vs. 62[14-93], $p=0.026$ and 29[2-100] vs. 56[7-85], $p=0.01$), respectively), and at 12 months – “Feeling hungry” (31[1-70] vs. 55[11-90], $p=0.014$), “Difficulty to resist food cravings” (15[0-65] vs. 47[8-100], $p=0.002$), “Eating in response to food cravings” (20[0-89] vs. 41[12-96], $p=0.004$), and “Difficulty to control eating” (23[0-53] vs. 46[13-95], $p=0.006$) (Fig. 1).

Conclusion

Individuals with severe obesity who achieved a target of $\geq 25\%$ total weight loss at one year post-SG have an early occurring improvement in overall eating control at 3 months that steadily persists at 6 and 12 months. Improvements in other aspects of eating control tend to follow later, at 6 and 12 months post-SG. These findings may assist in identifying individuals with inadequate response and choosing tailored behavioural, biofeedback-based techniques, and pharmaceutical interventions to help attain optimal weight loss targets.

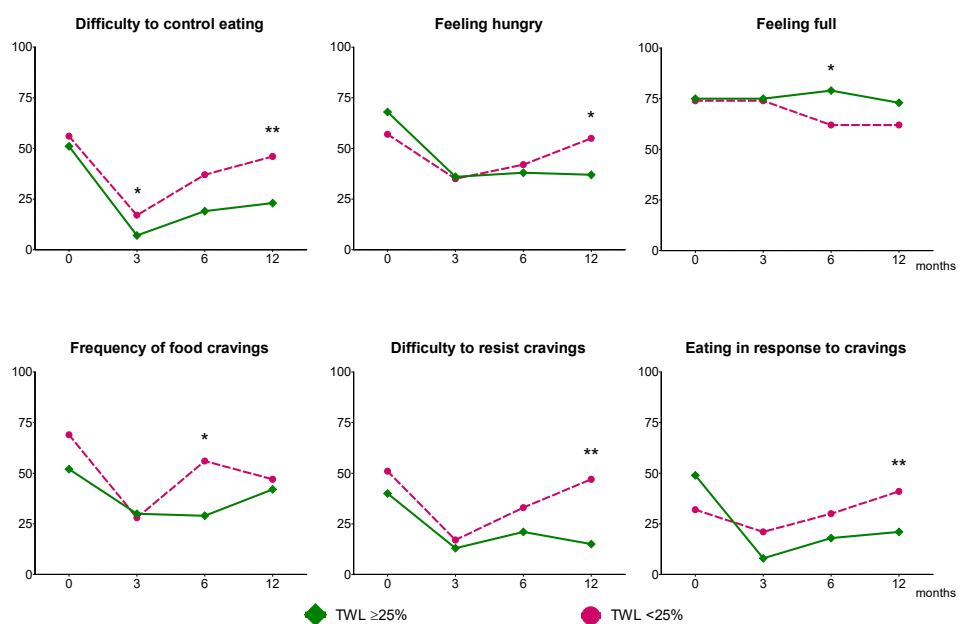


Fig. 1. Changes in selected Control of Eating Questionnaire scores between individuals with severe obesity who achieved a total weight loss $\geq 25\%$ target at one year after sleeve gastrectomy (solid green line) and those who did not (dotted pink line).

Differences in scores between groups analyzed using a two-tailed Mann-Whitney test. Statistical significance denoted as * ($p < 0.05$) and ** ($p < 0.01$)

O-59

**CONVERSION OF SLEEVE GASTRECTOMY TO ROUX-EN-Y GASTRIC BYPASS:
DIFFERENT STRATEGIES FOR OBESE AND NON-OBESE ASIAN PATIENTS**Owaid Almalki ⁽¹⁾ - Ming-Hsien Lee ⁽²⁾*Taif University, General Surgery, Taif, Saudi Arabia ⁽¹⁾ - Buddhist Tzu Chi Medical Foundation, Metabolic and Bariatric Surgery, Taoyuan, Taiwan ⁽²⁾***Background**

Sleeve gastrectomy (SG) is the most performed bariatric procedure now. Some patients would necessitate a revision to Roux-en-Y gastric bypass (RYGB) as a *salvage procedure* for intractable *gastroesophageal reflux disease* (GERD). However, outcome of the revision in Asians with co-existed obesity and those non-obese is not clear.

Methods

We retrospectively reviewed the data of patients who underwent revisional laparoscopic RYGB after SG between 2007 and 2019 for intractable GERD with data of one year follow-up. Pre-operative clinical data, perioperative outcomes, GERD symptoms, weight loss and medication details were analyzed. Patients were classified into those with body mass index (BMI) ≥ 25 and < 25 kg/m².

Results

Fifty-five patients (44 women, 11 men; mean age 42.5 years) were included. Mean interval from the initial SG to revision surgery was 51.2 months (range, 5–132). Mean body mass index before SG was 34.6 kg/m², whereas that before revision surgery was 27.6 kg/m². All the patients required continue *proton pump inhibitor* (PPI) to control the GERD symptoms before surgery. Among them, 36 (65.4%) patients in the obese group received long BP limb (>100 cm) RYGB for associated obesity but the common channel was assured to ≥ 400 cm or 70% of small bowel length, the other 19 (34.6%) patients in the non-obese group received standard BP limb (<100 cm) RYGB. There was no difference in basic characters between the two groups before revision surgery except a higher mean BMI (30.0 vs. 22.2 kg/m², $p < 0.001$), blood pressure and *triglyceride* in obese group. One year after revision surgery, all the patients had improved GERD symptoms but only 33 (60%) can completely wave PPI, without difference between the 2 groups. Obese group with a long BP limb RYGB had a significant higher % total weight loss (TWL) than non-obese group (%TWL 9.1% vs. -3.1%, $p = 0.005$).

Conclusion

Laparoscopic revision to RYGB is a safe and effective treatment for patients with intractable GERD after SG but some patients may still have residual GERD symptoms. Using a modified RYGB technique in revision surgery may help in weight reduction for obese Asian patients.

O-60

CONVERSION OF SLEEVE GASTRECTOMY TO ROUX-EN-Y GASTRIC BYPASS: INDICATIONS, MANAGEMENT AND RESULTS

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Sleeve gastrectomy (SG) represents more than 60% of bariatric procedures worldwide. Conversion of SG to Roux-en-Y gastric bypass (RYGB) for weight loss failure or Gastro-Esophageal Reflux-GERD is increasing. Intrathoracic migration of the sleeve often seems associated. The aim of our study was to analyze the relevance of the indications, the prevalence of an associated de novo hiatal hernia, and the outcomes of the conversion of SG to RYGB.

This is a retrospective study of prospectively collected data including all the patients who underwent a conversion of SG to RYGB from August 2013 to December 2022. 2 groups were compared: patients operated on because of weight loss failure (WLF gp) and those operated on for GERD (GERD gp). We analyzed in both groups demographic data, the incidence of an associated hiatal hernia, morbidity, weight loss outcomes and resolution of symptoms.

59 patients were included with an average follow-up of 30.5 months: 46 patients in the GERD gp (78%) were compared to 13 patients (22%) in the WLF gp.

Groups were comparable regarding age (47) and gender (women: 74%); BMI at conversion and prevalence of comorbidities were significantly higher in the WLF gp (41.8 kg/m² vs 33.3, p=0.0001).

In the GERD group: on preoperative gastroscopy, 30% (14/46) had a grade B esophagitis, 48% (22/46) had a significant hiatal hernia which required a posterior crural closure versus 23% (3/13) in the WLF group, not requiring a surgical treatment (p = 0.02). Conversion was very effective on GERD symptoms (93% of improvement), 52% of the patients stopped proton pump inhibitor treatment.

In the WLF gp, mean TWL% was 15.3%, significantly greater than in the GERD gp (TWL% = 4.6%, p = 0.01). The complication rate was 10% at 30 days and 3.4% after 30 days, not significantly different between groups (p = 1 and 1 respectively).

The main indication of conversion of SG to RYGB was because of GERD: in these indications, the incidence of intrathoracic migration of the sleeve is high requiring a surgical treatment with a very good efficacy on resolution of symptoms. Weight loss results were disappointing.

O-61

CONVERSION ROUX Y GASTRIC BYPASS AFTER SLEEVE GASTRECTOMY OR ONE-ANASTOMOSIS GASTRIC BYPASS FOR GASTROESOPHAGEAL REFLUX AND WEIGHT GAIN

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Background

Presently, Sleeve Gastrectomy (SG) is the most frequently performed bariatric procedure and the incidence of One Anastomosis Gastric Bypass (OAGB) is also increasing. Weight Regain (WR) and Gastroesophageal Reflux (GERD) are frequently observed after SG.

Objective

Aim is to report the results of conversion Roux Y Gastric Bypass (cRYGB) for GERD and WR after SG and OAGB.

Methods

Out of 50 RYGB procedures performed between March 2016 and March 2023, 20 were cRYGB (3 males, 17 females, mean age 48 years, mean weight 95,5 kg, mean BMI 34,1 kg/m², range 24,2-48,7 kg/m²) after SG which had been performed in our unit in 13 cases. At the time of redo surgery, all patients suffered from GERD. A significant hiatal Hernia (HH) was present in 6 cases and was repaired. Other comorbidities included Obstructive Sleep Apnea Syndrome (OSAS, 5 cases), type 2 diabetes (T2DM, 3 cases) and Arterial Hypertension (AH, 8 cases). In one case with WR, HH and GERD operated on elsewhere the SG failure was managed by OAGB without hiatoplasty. GERD severity was assessed by preoperative esophagogastroduodenoscopy (EGD) and by the Gastroesophageal Reflux Disease - Health-Related Quality of Life Questionnaire validated in Italian.

Results

At mean follow up of 20,7 months (range 3-60 months), GERD resolution was observed in all patients. Resolution of T2DM and OSAS occurred in 2 and 4 patients, respectively. Partial and complete resolution of AH occurred in 2 and 2 patients, respectively. Mean BMI is 27,6 kg/m² (range 18,2-36,4 kg/m²). One patient died for non-surgical related reasons 6 months after bariatric-metabolic surgery.

Conclusion

In patients with GERD and/or weight regain after primary bariatric surgery, cRYGB is associated with resolution of GERD and other comorbidities, and with satisfactory weight loss. The presence of HH and GERD in obese patients undergoing bariatric surgery should be properly evaluated and managed during the primary surgery so as to avoid additional operations.

O-62
CORRELATION BETWEEN SERUM SUPEROXIDE DISMUTASE AND THYROID FUNCTION BEFORE AND AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY

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Background

To investigate the cross-sectional and longitudinal correlation between serum superoxide dismutase (SOD) levels and thyroid function with obesity before and after laparoscopic sleeve gastrectomy (LSG).

Methods

Patients with morbid obesity (n = 219, 112 males and 107 females) who underwent LSG were selected. Patients were subdivided into normal levels of SOD (NSOD, n=112) and high levels of SOD (HSOD, n=107) according to the median value of SOD levels (183 U/ml). SOD and thyroid hormones were measured and compared at baseline, 3, 6, and 12 months after LSG.

Results

The HSOD group had lower body mass index (BMI), total thyroxine (TT4), and thyroid-stimulating hormone (TSH) than the NSOD group ($P < 0.001$, $P = 0.031$, $P < 0.001$, respectively), while had higher free triiodothyronine (FT3) and free thyroxine (FT4) ($P = 0.019$ and $P = 0.017$, respectively). SOD was significantly negatively associated with TSH ($r = -0.192$, $P = 0.005$) and positively associated with FT4 ($r = 0.205$, $P = 0.002$). Of all the patients, 46.5% (NSOD: 60.19%, HSOD: 36.27%) had subclinical hypothyroidism (SH), and the SH group had lower SOD levels than the non-SH group ($P = 0.003$). Preoperative SOD was a protective factor for SH (OR, 0.986; 95% CI: 0.976–0.995, $P = 0.004$). After LSG, SOD and FT4 levels were increased at 12 months after LSG, however, TSH, FT3, TT3 and TT4 levels decreased compared to the preoperative levels at 3, 6, and 12 months in the SH group. Postoperative changes in FT4 and TT4 levels correlated with changes in SOD levels ($r = 0.334$, $P = 0.012$; $r = -0.410$, $P = 0.006$).

Conclusion

SOD, which is related to thyroid hormones, protects against SH in patients with obesity. The improvement in thyroid function with SH after LSG may be related to increased SOD levels.

O-63

CORRELATION BETWEEN WEIGHT LOSS 1 MONTH AND 1 YEAR AFTER BARIATRIC SURGERY

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Background

Early identification of patients at risk of insufficient weight loss after bariatric surgery may allow the adoption of complementary treatment strategies in order to optimize weight loss.

Objective

To determine whether there is a significant correlation between weight loss at 1 month and 1 year after bariatric surgery.

Methods

A retrospective study included patients submitted to primary gastric sleeve (GS) or Roux-en-Y gastric bypass (RYGB) between January 2018 and March 2022 at this hospital. One hundred and seventy-two patients were evaluated and bivariate correlations were performed between weight loss, expressed as percentage of total weight lost (%TWL) or percentage of excess of BMI lost (%EBMI). Multivariate linear regression was performed for each of these variables adjusted for sex, age, surgery performed and weight loss at 1 month.

Results

There does not seem to exist a correlation between %TWL at 1st month and 1st year ($r = 0.059$, $p = 0.443$), but bivariate correlation is statistically significant between %EBMI ($r = 0.367$, $p < 0.001$). In multiple linear regression, %TWL was negatively influenced by age ($p < 0.001$) and positively correlated to RYGB surgery ($p=0.006$). The %EBMI at the 12th month is negatively influenced by age ($p = 0.002$) and male gender ($p=0.013$), but there is a statistically significant positive correlation between %EIMC at the 1st month and 1st year ($p= 0.000$).

Conclusions

The %EBMI seems to be predictive measure of weight loss in 1 year, according to an analysis adjusted to other variables. Age and male gender also seem to influence the %EBMI at 12 months. However, it is still not clear if the implementation of adjuvant treatment is justified by the existence of clinical impact due to increased %EBMI at the first month.

O-64
CORRELATION OF NON-INVASIVE INVESTIGATIONS WITH LIVER BIOPSY IN DIAGNOSING THE EXTENT OF FIBROSIS IN PATIENTS WITH MORBID OBESITY UNDERGOING BARIATRIC SURGERY

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Introduction

Non Alcoholic Fatty Liver Disease (NAFLD) is present in up to 90% of patients with morbid obesity. Patients with advanced fibrosis require continuous monitoring for progression. A non-invasive test, which can accurately predict advanced fibrosis, is the need of the hour for such patients.

Methods

This prospective observational study conducted at a tertiary care academic institute from March 2020 to November 2021 aimed to determine the best non-invasive marker of NAFLD in correlation with liver biopsy in morbidly obese patients. Patients with alcohol consumption > 20gm/day, Hepatitis B/C infection, autoimmune and storage disorders were excluded. The non invasive tests included Liver stiffness measurement (LSM), Controlled attenuation parameter (CAP), Enhanced liver fibrosis (ELF), AST to platelet ratio index (APRI) and Fibrosis-4.

Results

Out of the 48 patients in the study, 17.9% of the patients had advanced (F3/F4) fibrosis on liver biopsy. Enhanced Liver Fibrosis had an AUROC of 0.8 and 0.85 for significant and advanced fibrosis respectively. The cut off for Significant Fibrosis was 9.1 with a sensitivity of 84.62% and specificity of 78.26%. For advanced Fibrosis, the cut off was 9.33 with a sensitivity of 85.71% and specificity of 82.76%. The best LSM cut-off for significant fibrosis (AUROC 0.85) was 7.5kPa, which had 91.67% sensitivity and specificity of 57.69%. The best LSM cut-off for advanced fibrosis (AUROC 0.80) was 9.2kPa, with 83.33% sensitivity and 71.88% specificity. Out of the clinical scoring tests, APRI had an AUROC of 0.76 for Advanced Fibrosis. At a cut off 0.5952, a sensitivity of 71.4%, specificity of 84.38% and NPV of 93.1% were achieved. FIB4 performed very poorly in predicting any grade of fibrosis.

Conclusion

Non invasive markers including ELF, LSM and APRI score correlate well with liver biopsy. ELF was found to have the best predictive value for significant and advanced fibrosis as compared to other non invasive tests.

O-65

CORRELATION OF PHASE ANGLE AND BODY COMPOSITION IN BARIATRIC SURGERY PATIENTS

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Background

Bioelectrical impedance analysis (BIA) is widely used in bariatric surgery patients. Body compositions were calculated from equations consisting of body weight and height which can be inaccurate in people with severe obesity. Phase angle (PhA) is derived from the electrical properties of each component of body. There is limited data regarding the use of PhA for bariatric surgery patients.

Objective

To evaluate the correlation of PhA and body compositions from BIA during the pre-postoperative period in bariatric surgery patients.

Method

Retrospective review of Thirty-three bariatric surgery patients between June 2020 and June 2022. Body compositions and PhA from BIA were collected during preoperative, postoperative 3 months, and 6 months period. The correlation of PhA and body compositions were calculated with Pearson's correlation coefficient. The independent factor of PhA was analysed with multivariate linear regression.

Result

PhA was correlated with skeletal muscle (SM), total body water (TBW), and inversely correlated with %fat mass (%FM). In preoperative period (mean BMI=43±7.1) PhA was moderate correlate with SM ($r = 0.47$; $p = 0.005$) and TBW ($r = 0.48$; $p = 0.003$) but inverse correlated with %FM ($r = -0.56$; $p < 0.001$). In the postoperative 3 months period (mean BMI=35.5±6.2), PhA was strongly correlated with SM ($r = 0.72$; $p < 0.001$) and TBW ($r = 0.72$; $p < 0.001$) but moderately inverse correlated with %FM ($r = -0.62$; $p < 0.001$). In the postoperative 6 months period (mean BMI=32.0±5.6), PhA was strongly correlated with SM ($r = 0.71$; $p < 0.001$) and TBW ($r = 0.71$; $p < 0.001$) but moderately inverse correlated with %FM ($r = -0.48$; $p = 0.004$). From the multivariate linear regression analysis, PhA was associated with BMI and %FM ($P < 0.001$) at every period.

Conclusion

PhA was correlated with SM and TBW but inverse correlated with %FM. In bariatric surgery patients, correlation was stronger when BMI was decreased postoperatively. PhA was associated with BMI and %FM. Body compositions measured by BIA were inaccurate in people with severe obesity. PhA may be a useful parameter for bariatric surgery care.

O-66

COULD GLYCATED HEMOGLOBIN BE LEAKAGE PREDICTOR IN SLEEVE GASTRECTOMY?

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Background

Diabetes increases the risks related to surgery. At the same time, bariatric surgery improves diabetes. Glycated hemoglobin (A1C) is an index of diabetes severity.

Objectives

To find if A1c could be considered a predictor of Sleeve Gastrectomy related risks in diabetic patients, especially leakage.

Methods

Monocentric retrospective study considering all consecutive patients with obesity, with or without diabetes, who underwent bariatric surgical procedures, from January 2018 to December 2021. All patients had preoperative A1C values.

Results

4233 patients were considered. 522 patients (12.33%) were diabetics ($A1C \geq 6.5\%$). Of these, 260 patients (6.14%) had $A1C \geq 7\%$ and 59 (1.39%) $A1C \geq 8\%$. 1718 patients (40.58%) were in a pre-diabetic range ($A1C 5.7\% - 6.5\%$). Higher A1C values were associated with older age, male gender, higher BMI and increased rate of comorbidities. A longer operative time was observed for patients with $A1C \geq 7\%$, $p = 0.027$ (53 ± 20 vs 51 ± 18 minutes). The frequency of leakage was significantly higher when $A1C \geq 7\%$ (3.8% vs 2.0%, $p = 0.026$). The frequency of leakage further increased when $A1C \geq 8\%$ (5.1%), although this difference did not reach statistical significance.

Conclusions

Patients with obesity and $A1C \geq 7\%$ need to be referred to a diabetologist to treat diabetes before surgery and consequently decrease the risk of leakage.

O-67

CURRENT PATHWAYS ON THE MANAGEMENT OF POST-OPERATIVE BARIATRIC EMERGENCIES IN THE UNITED KINGDOM – A NATIONAL SURVEY

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Background

Bariatric and metabolic surgery is increasingly performed globally especially with the rise of medical tourism. Patients who undergo bariatric procedures can develop complications in the early post-operative setting or later and may present with an acute abdomen to the emergency department. Management of these patients may pose unique challenges to the general surgeon due to their atypical, insidious presentation and altered gut anatomy.

Objectives

To establish current pathways on the management of post-operative bariatric emergencies in the United Kingdom and surgeon's confidence in managing these.

Methods

An online survey hosted on Survey Monkey (*Momentive Inc, New York*) was distributed nation-wide by British Obesity and Metabolic Surgery Society (BOMSS) and The Upper Gastrointestinal Surgeons (TUGS). The survey was open for one month to all general surgeons including trainees, associate specialists, and consultants. Data was analysed using descriptive statistics, with a subset Chi square analysis comparing surgeon's confidence in managing post-operative bariatric emergencies according to subspecialty.

Results

There were 85 respondents from various subspecialties, including upper gastrointestinal (57%), colorectal (28%), emergency general surgery (8%), hepatobiliary (4%), trauma (2%), and transplant (1%). 68% respondents' institution provide bariatric surgery services and 52% practise in high-volume bariatric units performing >125 procedures/ year. 95% respondents have managed patients presenting with post-operative bariatric emergencies on the unselected take. The provision of bariatric surgery on-call services is variable by institution. Some units have dedicated 24/7 services (15%), 'in hours' services (7%), or 'ad hoc' only when a bariatric surgeon is on-call (20%). Upper gastrointestinal surgeons were significantly more confident than the rest in managing the following: internal hernia ($p=0.0175$), gastric balloon complications ($p=0.0001$), bleeding marginal or anastomotic ulcer ($p=0.0001$), post-operative bleeding ($p=0.0015$), and intra-abdominal sepsis ($p=0.0251$). 62% surgeons report a need for dedicated bariatric on-call services within their region. Among the reasons cited include ability of bariatric services to offer definitive care, support of the multidisciplinary team, and improved quality of care.

Conclusion

Patients with post-operative bariatric complications are commonly managed by general surgeons on the acute take. The provision of bariatric on-call services is variable across the United Kingdom.

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DE NOVO GASTROESOPHAGEAL REFLUX AFTER SLEEVE GASTRECTOMY; CORRELATION WITH BOUGIE SIZE AND STAPLING DISTANCE FROM THE PYLORUS – A SYSTEMATIC REVIEW AND META-ANALYSIS

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Background

Laparoscopic sleeve gastrectomy (LSG) is a risk factor for de novo gastroesophageal reflux disease (GERD). According to literature, it is defined as absence of preoperative GERD and the presence of postoperative GERD symptoms/proton pump inhibitor (PPI) intake and/or endoscopic findings of GERD. The impact of surgical technical factors on the prevalence of de novo GERD is still unclear, especially in the long-term.

Objective

The objective is to assess the effect of bougie size and stapling distance from the pylorus on the prevalence of de novo GERD in cases five years or more.

Methods

A systematic review and meta-analysis were performed in accordance with the MOOSE Guidelines through electronic searches in two databases: PubMed and Embase. Study selection, literature search, data extraction, and quality assessment were performed independently by two investigators. Meta-analysis of prevalence was calculated by Freeman-Tukey double arcsine transformation using the inverse variance method (Mantel-Haenszel).

Results

A systematic search was performed and nineteen studies were eligible for systematic review and meta-analysis. A total of 1310 cases with a postoperative follow-up ranging from 60 to 140 months were identified. The overall rate of de novo GERD was 23.7% (95% CI, 16.7-31%). There was no significant association between bougie size and de novo GERD ($p=0.368$). Increasing stapling distance from the pylorus was associated with higher prevalence of de novo GERD (≤ 3 cm:10%; 4-5 cm:21.6%; and >5 cm: 39.5%; $p < 0.0001$). Meta-regression showed a linear correlation between stapling distance from the pylorus and de novo GERD prevalence ($p < 0.0001$): each 1 cm increase being associated with 8.1% increase in the prevalence of de novo GERD.

Conclusion

The overall prevalence of de novo GERD five or more years after LSG was 23.7%. The stapling distance from the pylorus was correlated with de novo GERD, with each 1 cm of antrum length spared being associated with an 8.1% increase in the prevalence of de novo GERD. No correlation was found between bougie size and de novo GERD. Further, carefully designed prospective studies are needed to assess the exact impact of surgical technique on LSG outcomes, including the prevalence of de novo GERD.

O-69

DEVELOPMENT AND VALIDATION OF A NOMOGRAM FOR PREDICTING ANEMIA ONE YEAR AFTER BARIATRIC SURGERY: ANALYSIS FROM MULTICENTRIC COHORTS

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Background

Anemia is a common nutritional complication following bariatric surgery, with a reported prevalence of 20-50%. Early detection and intervention are necessary to prevent anemia after bariatric surgery. However, no tool has yet been developed to identify individuals at high risk for postoperative anemia to guide nutritional monitoring and supplementation.

Objectives

To develop and externally validate a nomogram for predicting anemia one year after sleeve gastrectomy (SG) and Roux-en-Y gastric bypass (RYGB).

Methods

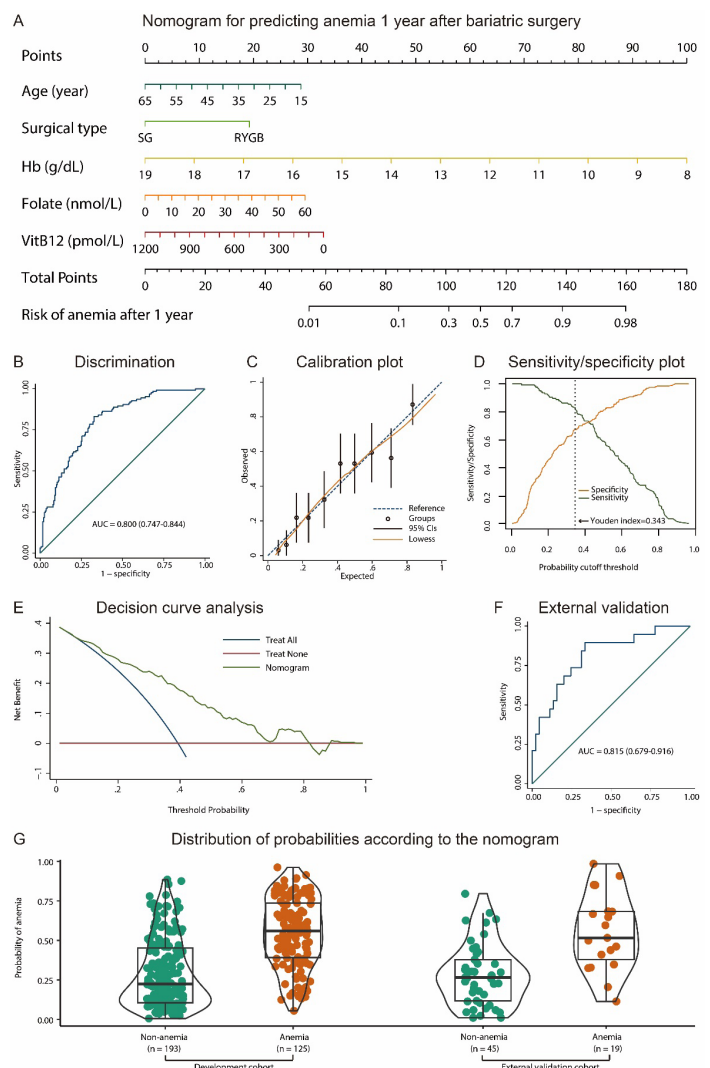
Patients with obesity undergoing SG and RYGB in a Chinese center between 2018 and 2020 were included in the development cohort. Anemia was defined as hemoglobin <12 g/dL for females and <13 g/dL for males. Predictors were identified using univariate and multivariate logistic regression analyses from 38 preoperative variables to establish the nomogram. The discriminative ability, calibration, and clinical value were tested using the area under the curve (AUC), calibration plot, and decision curve analysis. External validation of the nomogram was performed in an independent contemporary Chinese cohort.

Results

The development cohort consisted of 318 patients, of whom 125 (39.3%) experienced anemia one year after surgery. According to multivariate regression and clinical significance, age (OR: 0.955, 0.926-0.984; $P=0.003$), surgical type (OR: 4.724, 2.317-9.637; $P<0.001$), preoperative hemoglobin (OR: 0.480, 0.391-0.590; $P<0.001$), preoperative folate (OR: 1.041, 1.011-1.070; $P=0.006$), and preoperative vitamin B12 (OR: 0.998, 0.996-0.999; $P=0.009$) were independent risk factors for postoperative anemia and incorporated to construct the nomogram. The nomogram showed excellent discrimination, with the bootstrap bias-corrected AUC of 0.800 (0.747-0.844). The calibration plot and brier score (0.177) both indicated good calibration. Under the Youden index of 0.343, the sensitivity was 83.2%, and the specificity was 67.4%. Decision curve analysis further confirmed the clinical usefulness of the nomogram. The external validation cohort comprised 64 patients who underwent SG and RYGB at another Chinese center; 19 of these patients experienced anemia one year after surgery. The AUC remained stable at 0.815 (0.679-0.916), indicating that the nomogram has excellent robustness and generalizability.

Conclusion

After being developed and externally validated with multicentric cohorts, this first nomogram for postoperative anemia presented solid performance as a convenient reference to help decision-making.



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DIAGNOSTIC AND THERAPEUTIC OUTCOMES AFTER THEATRE VISITS POST BARIATRIC SURGERY

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Background

Bariatric Surgery remains the mainstay of surgical treatment for obesity. Long term symptoms post bariatric surgery is not uncommon, especially abdominal pain which accounts for majority of postoperative complaints and emergency department visits.

Objectives

The aim of study was to determine important causes of abdominal pain after bariatric surgery and elective surgical interventions done to manage this important problem in these patients.

Methods

All patients who underwent bariatric surgery in tertiary care high volume centre over 7-year period were included in the study. Patients subjected to elective surgical interventions for post-operative abdominal pain with a minimal 30 day follow up were included in final analysis. Pre-operative investigations, intra-operative findings and therapeutic interventions were recorded. Patients who underwent emergency surgical intervention, revisional bariatric surgery and gastric band related complications were excluded.

Results

1109 patients (124 sleeve gastrectomy, 11 OAGB and 974 RYGB) who underwent primary bariatric surgery were analyzed. 95 patients underwent elective surgical interventions in form of diagnostic laparoscopy followed by definitive intervention when required. 25 patients were diagnosed with internal hernia and underwent repair with median time for intervention of 35 months (7-157), 24 patients underwent candy cane segment excision with median time for intervention of 48 months (7-184), 6 patients had both candy cane/internal hernia, 2 had adhesions between blind-end of GJ anastomosis and JJ anastomosis, 3 patients gastric pouch hiatal herniation, 2 patients had sleeve gastrectomy hiatal herniation, 1 patient was diagnosed with Roux-en-O misconstruction, 10 needed adhesiolysis, 1 port site hernia, 2 patients had JJ intussusception, 1 had gastric pouch torsion post OAGB, 2 patients sleeve gastrectomy torsion, 1 had GJ fistula. 15 patients had negative diagnostic laparoscopy and no cause for symptom found. Overall median time for intervention was 47 months (7-184). 80 patients who underwent definitive intervention - 77 (96.2%) had resolution of symptoms.

Conclusion

Patients post bariatric surgery can present with wide range of complications, including benign as well as life threatening entities. The diverse causes require broad evaluation incorporating detailed history, clinical assessment and investigations. In absence of a clear diagnosis, a low threshold for diagnostic laparoscopy is of paramount importance.

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DIETARY NUTRITIONAL TREATMENT DROP-OUT RATE IN A COHORT OF PRE-BARIATRIC SURGERY SUBJECTS ACCORDING TO EATING BEHAVIOUR AND GENDER

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Actually, bariatric surgery (BS) is considered the most effective therapeutic strategy to induce weight loss (WL) reducing comorbidity and mortality in patients with severe obesity.

In pre-surgery period, a valid nutritional management plays a pivotal role in order to obtain WL and avoid micronutrient deficiency reducing peri-surgical and post-bariatric complications.

The aim of this study was to assess, during the pre-bariatric period, if there was an association between eating behaviour (EB) patterns and nutritional treatment drop-out rates in a cohort of BS candidate subjects.

86 patients (56 F) with Body Mass Index (BMI) ≥ 35 kg/m², attending at Outpatients Clinic of the I.P. “Diet Therapy in transplantation, renal failure and chronic pathology”, University of Naples Federico II, were recruited. At baseline (T0), subjects enrolled showed different EB patterns (diagnosed after psychiatric counseling): 32,5% gorging (Go), 15% grazing (Gr), 8,5% binge eating (BE), 1% loss control of eating (Le), 1% Night Eating Syndrome (NES), 3,5% sweet-eating (SE), 1% Go+SE, 32,5 % Go + snacking (Sn), 1,5% Go + NES, 1% Gr + NES, 2,5 % Gr + SE.

All subjects were stratified into different groups according to gender and EB. Anthropometric measurements and body composition analysis were evaluated at T0 and after 3 months (T1) and 6 months (T2) of treatment with a hypocaloric low-carb diet.

Women showed a more varied pattern of EB and Go and Gr (\pm snacking or sweet-eating) were the ones most represented in both genders. At T1, 39,5 % (M 38,2%, F 61,8%) of subjects dropped-out independently of EB and gender; no differences in EB patterns were detected in 60,5% (M 32,7%, F 67,3%) who returned for nutritional follow-up. Among these subjects, at T2 26,9% (M 28,6%, F 71,4%) dropped-out and, again, this finding was independent of EB pattern in both genders.

In conclusion, our preliminary results showed that there is no association between pre-BS drop-out rate and EB as well as any EB seems to show better results about WL detected at both T1 and T2. Further data on a larger population are needed to confirm our preliminary results.

O-72

DIFFERENCE IN CHANGES IN LIPID PROFILE AFTER LSG AND LMGB/OAGB

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Background

Obesity is associated with increased mortality due to higher cardiovascular risk. Some proportion of the risk is attributed to dyslipidemia in the form of high levels of serum total cholesterol, triglycerides, and low levels of HDL cholesterol. Both procedures the laparoscopic sleeve gastrectomy (LSG) and laparoscopic Mini gastric bypass / One anastomosis gastric bypass (LMGB/OAGB) had shown to have some positive effects on lipid profile with some variability in improvement. We aimed to study the difference in changes in lipid profile after LSG and LMGB/OAGB.

Methods

This study was performed as a retrospective case-matched study which compared effects of LSG and LMGB/OAGB on lipid profile of patients who underwent bariatric surgery in the year 2018 and 2019. The matching was done based on criteria of initial body mass index (BMI).

Results

Out of a total 240 selected patients, 116 patients underwent LSG and 124 patients underwent LMGB/OAGB. There was a significant improvement in all four measures of lipids in LMGB/OAGB group. While serum triglycerides and HDL cholesterol improved significantly in LSG but no significant reduction was observed in serum total cholesterol and LDL cholesterol in LSG group. There was a significant reduction in cardiovascular risk calculated as total cholesterol: HDL cholesterol ratio following bariatric surgery overall ($p = 0.002$), LMGB/OAGB ($p=0.002$) but insignificant in LSG ($p = 0.388$).

Conclusion

LMGB have better effects on lipid profile as compare to LSG. Also LMGB had better effect in terms of reducing cardiovascular risk attributed to obesity in UAE obese population. Thus, sleeve gastrectomy may be considered as less effective as compared to mini gastric bypass for dyslipidemia improvement in UAE patients.

Keywords: Dyslipidemia, Lipid profile, Bariatric surgery, Sleeve gastrectomy, Mini Gastric bypass.

O-73

DIFFERENCES IN LONG-TERM OUTCOME BETWEEN ONE ANASTOMOSIS GASTRIC BYPASS AND ROUX-EN-Y GASTRIC BYPASS IN PATIENTS WITH BMI > 50 KG/M2

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Objective

To compare long-term outcomes after One Anastomosis Gastric Bypass (OAGB) with Roux-en-Y Gastric Bypass (RYGB) in patients with BMI ≥ 50 kg/m². Outcomes were evaluated in terms of weight loss, remission of comorbidities, complications (short- and long-term); we also present the proportion of patients with a successful long-term outcome.

Methods

This retrospective single-center cohort study focused on adult patients with BMI ≥ 50 kg/m² undergoing a primary OAGB or RYGB in a non-academic teaching hospital in the Netherlands between 2015-2017. Successful outcome was defined by: 1) no short- or long-term complications of Clavien-Dindo grade \geq III, 2) Total Weight Loss (TWL) $> 20\%$ after 5 years, and 3) partial/total remission of hypertension, diabetes mellitus, sleep apnea and asthma/chronic obstructive pulmonary disease.

Results

158 patients underwent an OAGB and 32 patients an RYGB. Both procedures resulted in equal weight loss during all five years of follow-up; TWL after 5 years was 33.6% in patients with OAGB and 29.1% in patients with RYGB (p 0.062). Remission of comorbidities also did not differ. More patients after RYGB suffered from major short-term postoperative complications (6.3% versus 0.6%; p 0.020). Patients after RYGB were more often affected by long-term complications, including deficiency in macronutrients requiring enteral feeding (3.1% versus 0%; p 0.027), hypoglycemia requiring medication (6.3% versus 1.3%; p 0.076), stenosis at the anastomosis (6.3% versus 0%; p 0.002), and further surgery (18.8% versus 2.6%; p 0.029). Due to reflux, 9.6% of the patients with OAGB underwent conversion to RYGB. 77.2% of the patients with OAGB had a successful long-term outcome compared to 79.2% of the patients with an RYGB (p 0.833).

Conclusion

RYGB resulted in more complications, both short- and long-term, in patients with BMI ≥ 50 kg/m² compared to OAGB. The percentage of successful long-term outcome did not differ between both procedures.

O-74

DIMENSIONAL INVESTIGATION OF FOOD ADDICTION IN INDIVIDUALS WHO HAVE UNDERGONE BARIATRIC SURGERY

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Background

Food Addiction (FA) emerged in the 1990s as a possible contributor to the increasing prevalence of obesity and overweight, in conjunction with changing food environments and mental health conditions. However, FA is not yet listed as one of the disorders in the DSM-5 and/or the ICD-11. Although there are controversies and debates in the literature about the classification and construct of FA, the most common approach to access it is the use of a research tool - the Yale Food Addiction Scale (YFAS) - which approximates the concept of FA to the concept diagnosis of dependence on psychoactive substances. There is a need to explore the dimensional phenotypes accessed by YFAS in different population groups for a better understanding and scientific support of FA diagnoses.

Methods

The primary objective of this project was to investigate the construct validity of the FA concept by mYFAS 2.0 in individuals who underwent bariatric surgery (n = 100) at the Hospital Estadual Mário Covas since 2011. Statistical analyzes were conducted using the STATA software. In this sense, structural or factor validity was the type of construct validity investigated using exploratory factor analysis (EFA) and item response theory (IRT) techniques.

Results

EFA showed that the one-dimensional model was the most parsimonious. The IRT showed that all criteria contributed to the latent structure, presenting discrimination values greater than 0.5, with most presenting values greater than 2.

Conclusion

This study reinforces a FA dimension in patients who underwent bariatric surgery. Within this dimension, we identified the most severe and discriminating criteria for the diagnosis of FA.

O-75

DOES ROBOTIC-ASSISTED SURGERY IMPROVE THE OUTCOMES OF REVISIONAL BARIATRIC PROCEDURES?Rocio Castillo-Larios - Jorge Cornejo - Naga Swati Gunturu - Yilon Lima Cheng - Enrique Fernando Elli*Mayo Clinic Florida, Dept. of General Surgery, Jacksonville, United States***Introduction**

A revisional bariatric surgery (RBS) is necessary in about 28% of the patients, accounting for 15.4% of all bariatric procedures. The role of robotic surgery in RBS is still subject of debate. We aim to report the outcomes of robotic-assisted RBS at our institution.

Methods

We identified patients who underwent robotic-assisted RBSs at Mayo Clinic Florida between January 1, 2016, and May 31, 2022. We analyzed patient demographics and indications for surgery. Measured outcomes included peri- and post-operative morbidity, readmissions, comorbidity management, and weight loss at 6-, 12- and 24-month follow-ups.

Results

106 patients were included in our analysis. Primary procedures were adjustable gastric band 44 (41.5%), sleeve gastrectomy 42 (39.6%), Roux-en-Y gastric bypass (RYGB) 18 (17%), duodenal switch (DS) 1 (0.9%), and vertical banded gastroplasty 1 (0.9%). RBSs performed included 85 (78.7%) RYGB, 16 (14.8%) redo-gastrojejunostomy, and 5 (4.6%) DS. Median time to revision was 8 (range 1-36) years, and the main indication was insufficient weight loss (49%). Five (4.7%) cases required conversion to an open surgery. Median length of hospital stay was 2 (range 1-16) days, and 9 (8.5%) patients were readmitted during the first 30 days. Only 4 (3.7%) patients had early Clavien-Dindo grade III or higher adverse events. No anastomotic leaks were documented. Median excess weight loss was 35.1%, 42.23%, and 45.82% at the 6-, 12-, and 24-month follow-up. Of 57 patients with hypertension, 29 (50.9%) reduced their medication dosage, and 20/27 (74.1%) reduced their diabetes mellitus medication dosage. Finally, of the 75 patients with symptoms, 64 (85.3%) reported an improvement after the RBS.

Conclusion

Robotic-assisted RBS is safe and is associated with a low major adverse event rate. It also significantly improves patients' comorbidities and symptoms and leads to considerable weight loss.

O-76

DON'T FEAR THE BLEED: ASSESSING POSTOPERATIVE BLEEDING RISK AFTER INSTITUTING STANDARDIZED PROPHYLACTIC HEPARIN USE IN BARIATRIC SURGERY PATIENTS

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Introduction

Bariatric surgery is a frequently performed procedure in the United States, with approximately 40,000 procedures completed annually. Patients who undergo bariatric surgery are at high risk for postoperative thrombosis, with a venous thrombosis (DVT) rate of up to 6.4%. Despite this relatively high risk, there is a lack of guidelines recommending postoperative DVT prophylaxis. In fact, most bariatric centers lack a standardized protocol for DVT prophylaxis. Postoperative bleeding rates after bariatric surgery are only 1.5%; however, the risk for bleeding may lead to hesitancy for more liberal DVT prophylaxis.

Objective

To examine bleeding events and DVT rates in patients undergoing bariatric surgery after instituting a standardized DVT prophylaxis protocol.

Methods

This is a retrospective analysis of all primary bariatric surgeries at a single institution in 2019 and 2021. Data was obtained from MBSAQIP and electronic medical record review for all patients undergoing sleeve gastrectomy, roux en-Y gastric bypass, or conversion to roux en-Y gastric bypass during this time period. The primary outcome was composite bleeding events, which included: postoperative transfusion, postoperative endoscopy or return to OR (for bleeding), intra-abdominal hematoma, GI bleeding, or incisional hematoma. Patients were prescribed 40mg of enoxaparin twice daily for 14 days postoperatively starting in 2021.

Results

There were a total of 2067 patients in the cohort with 1043 surgeries in 2019 and 1024 surgeries in 2021. There was no difference between bleeding events after instituting a DVT prophylaxis protocol in 2021 (27 vs 28 events, $p=0.75$). There was no difference in the incidence of any of the individual bleeding events between 2019 and 2021. Additionally, there was no significant difference in the rate of VTE between 2019 and 2021 (2 vs 5 events, $p=0.28$).

Conclusion

After instituting at standard protocol of prophylactic heparin for 14 days postoperatively in 2021, we found no increased rate of bleeding events in patients undergoing bariatric surgery. Despite no difference in the rate of DVT with more liberal use prophylactic heparin, there was also no difference in individual bleeding events. Thus, surgeons should consider more liberal use of prophylactic heparin in patients undergoing bariatric surgery without fear of bleeding.

O-77

EARLY POST-SLEEVE GASTRECTOMY BLEEDING: IS THERE ANY CHANGES?

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Background

Bariatric surgery is most definitive treatment of obesity worldwide. Indication for surgery was increased after changes in guidelines for bariatric surgery. The most common procedure done was sleeve gastrectomy in Egypt and most of other countries. Early postoperative complications are bleeding, thromboembolic and leakage. Acute bleeding postoperative is serious and life threatening condition.

Objectives

We try to find many methods to decrease postoperative complication such as bleeding and so improvement of outcomes post-sleeve gastrectomy.

Materials and methods

A retrospective study was conducted on 1752 patients from 2016 to 2022 divided into two groups group A include 876 patients from January 2016 to March 2020 in which we do LSG and control of bleeding by just clipping of bleeding point and group B include 876 from April 2020 to November 2022 and in this group we add different strategies to decrease bleeding as buttressing of suture line, clipping of epiploic blood vessels, closure of port site and increase blood pressure of the patient at the end of our surgery.

Results

There is no significance between both groups as regard age, BMI or comorbidities. we had 17 case of bleeding (1.9%) in group A and 5 cases need for reexploration and had 5 cases in group B (0.6%) one case of them need reexploration. Length of hospital stay average 4 days. one case need for readmission and There was no mortality.

Conclusion

Early bleeding postsleeve gastrectomy have different presentation and may be life threatening condition. Good follow up of the patients, early detection and early reentry to operative room is important to decrease the morbidity and mortality.

O-78

EARLY PREGNANCY (≤ 12 MO) AFTER BARIATRIC SURGERY: DOES IT REALLY INFLUENCE MATERNAL AND PERINATAL OUTCOMES?

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Background

Current guidelines do not recommend pregnancy within 12 months after bariatric surgery, however, there is a lack of consensus and scientific evidence to support this. The study is to evaluate the influence of early pregnancy (≤ 12 months) after bariatric surgery on maternal and perinatal outcomes.

Methods

PubMed, Embase, Web of Science and the Cochrane Library were searched for all studies comparing maternal and perinatal outcomes for surgery-to-conception intervals of ≤ 12 months and > 12 months.

Results

A total of 13 studies were included. The pooled results showed that early pregnancy was associated with insufficient gestational weight gain (WMD: -6.04, 95%CI [-7.39, -4.15], $p < 0.01$). No significant difference was found in gestational diabetes, gestational hypertension, preeclampsia, caesarean section, and postpartum hemorrhage between surgery-to-conception intervals of ≤ 12 months and > 12 months. There were also no significant differences between the two groups regarding the neonatal outcomes, including preterm birth, small for gestational age, large for gestational age, macrosomia, birth defect, neonatal intensive care unit admission, and Apgar score ≤ 7 within 5 min.

Conclusions

Early pregnancy (≤ 12 mo) after bariatric surgery seems not to be significant adverse effects on maternal and perinatal outcomes, with the exception of insufficient gestational weight gain. Pregnancy after bariatric surgery should be personalized based on the individual patient. Further studies on larger cohorts are warranted.

O-79

EARLY WEIGHT LOSS OUTCOMES AS A PREDICTOR OF 5-YEAR WEIGHT LOSS OUTCOMES AFTER ONE ANASTOMOSIS GASTRIC BYPASS

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Background

Weight loss failure after bariatric surgery impose great stress on patients and surgeon and great costs on healthcare systems. The literature review shows that weight loss failure is the most common cause of redo bariatric surgery. Therefore, identifying the predictors of weight loss failure can help bariatric surgeons to diagnose non-responder patients in early stages.

Objectives

The present study aims to determine the association of primary weight loss at three, six and 12 months after surgery and long-term weight loss outcomes.

Methods

This retrospective cohort study was conducted on 329 patients undergoing OAGB who were followed for 60 months. For prediction of short-term (24 months) and long-term (60 months) successful weight loss and weight-regain, we used %TWL and BMI at any regular follow ups.

Results

Mean age of the patients was 44.13 years. A total of 86% patients were female. The mean preoperative BMI was 45.13 kg/m². In preoperative indices, age, sex, DLP, hypothyroidism and HTN were not significant to predict successful in short-term and long-term weight loss but %TWL at 12-month is significant predictor of successful weight loss in short-term and long-term follow up. In prediction of weight regain, preoperative indices (except BMI) were not significant to predict weight-regain at short-term and long-term follow up but 12-month %TWL was significant. The findings suggest that an initial 3-month %TWL more than 18.03% is the best predictor of successful weight loss at 24-month while 3-month %TWL more than 17.36% for successful weight loss at 60-month.

Conclusion

This index can help surgeons find these patients early and provide helpful instructions to manage their issues more promptly and efficiently to reach better weight loss outcomes.

O-80
EFFECT OF ANTI REFLUX SUTURE ON REFLUX INCIDENCE AFTER LAPAROSCOPIC GASTRIC PLICATION

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Background

The modern life style has caused changes in eating habits and decrease in physical activity. So we are facing obesity as a global issue. Bariatric surgeries are an effective method of weight loss for people with BMI>35+comorbidity and BMI>.40. Laparoscopic gastric plication is a new method among bariatric surgeries. One of its side effects is gastroesophageal reflux which happens due to increase in stomach pressure which brings it near to LES pressure.

Objectives and method

In this clinical trial, 210 patients were selected and randomly divided in two groups. In trial group, In addition to LGP, over a 28 fr buggy the surgeon turned a wrap of stomach fundus from anterior side of esophagus and formed an anterior reflux suture. In the other group only LGP was done. Standard reflux questioner was filled at one and six month follow up and the result was compared.

Result

In one month follow up, number of patients with episodes of reflux were 13 (12%) in antireflux suture group, compared to 23(21%) patients in lone LGP group.(p value 0.067) in 6 month follow up incidence of reflux was 6(5%) compared to 22(20%) respectively. (p value: 0.001).

Conclusion

In 6 month follow up there was a meaningful difference in lower incidence of reflux in morbid obese patients undergoing LGP plus antireflux suture, compared to lone LGP.

O-81**EFFECT OF ANTRUM SIZE ON GLP1 LEVELS AND GLYCEMIC CONTROL AFTER SLEEVE GASTRECTOMY IN DIABETIC ADOLESCENTS: THE 5TH YEAR DATA**

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Background

We presented previously our early data on Glucagon Like Peptide 1 (GLP1) response and glycemic control in a group of adolescents with severe obesity and type II diabetes after sleeve gastrectomy, where an improved GLP1 response was documented together with excellent diabetes remission (up to 87.5%), especially following aggressive antral resection.

Objective

To present the 5th year follow up data on GLP1 levels and glycemic control after sleeve gastrectomy in our studied group.

Methods

After informed consent and approval of our research ethics committee, the study was conducted on 36 adolescents, with type 2 diabetes and severe obesity. All patients had sleeve gastrectomy where group A had the first stable line at 2cm from the pylorus, and group B at 5cm. They were followed up for 5 years regarding the weight loss, GLP1 response and the glycemic control.

Results

More aggressive transection closer to the pylorus (2cm) resulted into better initial weight loss and better initial increase in GLP1 levels. By the 5th year, the weight loss was still better, but the GLP1 improved response was not evident. The aggressive resection led also to significantly better full remission in type II DM, even at 5 years of follow up.

Conclusion

By the fifth year, the maintained weight loss and excellent remissions did not depend entirely on a sustained GLP1 response, other factors may play a role.

O-82

EFFECT OF BARIATRIC AND METABOLIC SURGERY ON CLINICAL COURSE OF MULTIPLE SCLEROSIS IN PATIENTS WITH SEVERE OBESITY

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Background

Multiple sclerosis (MS) is an autoimmune chronic inflammatory disease and the most common acquired chronic demyelinating disease. There is a two-fold risk for MS in patients with obesity in early stages of life, may be due to decreased level of vitamin D in these patients. Although there may be some concerns about changes in the clinical course of MS after MBS but these surgical procedures may lead to improvement of MS clinical course with adjustment the obesity related pro-inflammatory state, improvement of vitamin D metabolism, regulation of immune response and change of gut microbiota.

Objectives

The present systematic review and meta-analysis aimed to evaluate the effect of MBS on clinical course of MS in patients with severe obesity.

Methods

This review was performed in accordance with the guidelines for systematic review provided by the Cochrane Cooperation and the preferred reporting items for systematic reviews and meta-analyses (PRISMA) guidelines

Results

Out of 128 retrieved abstracts, 102 full papers were reviewed and finally 11 studies included that reported MS outcomes on 394 patients. The included studies were six cohorts, two case reports and three case series. The types of MS in patient were relapsing- remitting (77.5%), secondary progressive (17.5%) and primary progressive (4.8%) and the mean duration of MS at surgery was 7.6 ± 4.6 year and the mean follow up time after surgery was 35.5 ± 5.3 months. Totally 394 patients (53 male and 341female patients) were included in this systematic review. Regarding the type of MBS, there were five laparoscopic adjustable gastric banding, nine one-anastomosis gastric bypass, two duodenal switch, 199 Roux-en-Y gastric bypass, 58 sleeve gastrectomy and two revisional bariatric surgeries. Hypertension, type 2 diabetes mellitus, and obstructive sleep apnea syndrome were the most frequently reported obesity associated medical problems. Clinical course of MS has been mentioned for 28 patients that in half of them there was no clinical course changes. Improvement and exacerbation of MS were reported in 25% and 25% of patients respectively.

Conclusion

MBS is safe and effective in patients with severe obesity and MS and may lead to improvement of MS course.

O-83

EFFECT OF GASTROJEJUNAL ANASTOMOSIS DIAMETER IN LAPAROSCOPIC ONE-ANASTOMOSIS GASTRIC BYPASS FOR THE TREATMENT OF OBESITY AND RELATED DISORDERS

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Background

One-anastomosis gastric bypass (OAGB) is a safe and effective bariatric procedure that employs a long gastric pouch with antecolic loop gastrojejunal (GJ) anastomosis. The optimum anastomosis diameter is still unclear, as there are many differences in the literature.

Objectives

This study aims to evaluate the short-term effect of different GJ anastomosis diameters in patients offered laparoscopic OAGB regarding weight loss, bile reflux, and nutritional and metabolic effect.

Methods

A total of 59 patients were included in this study, and they were divided into two groups: group A included patients with GJ anastomosis made by a 45-mm stapler reload, and group B included patients with GJ anastomosis made by 20 mm of the stapler reload.

Results

There was no statistically significant difference between groups regarding postoperative mean BMI at 3, 6, 9 months, and 1 year; excess weight loss (EWL%); remission of comorbidities; and bile reflux ($P > 0.05$). Hypoalbuminemia was significantly more evident in group B at 3, 9 months, and 1 year, with P values of less than 0.001, 0.035, and 0.031, respectively. Moreover, group B patients had more iron-deficiency anemia, which was statistically significant at 3, 6, and 9 months ($P < 0.05$), whereas there was no significant difference at 1 year ($P = 0.128$).

Conclusion

OAGB is an effective bariatric procedure, but the use of a 45-mm stapler reload for GJ anastomosis may be associated with less nutritional deficiencies than using 20 mm of the reload. Further studies are needed on a larger number of patients with long-term follow-up.

O-84

EFFECT OF LIMB LENGTH ON WEIGHT LOSS OUTCOMES FOLLOWING BILIOPANCREATIC DIVERSION WITH DUODENAL SWITCH: A MULTI-CENTERED STUDY

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Background

The effectiveness of biliopancreatic diversion with duodenal switch (BPD/DS) in terms of weight loss has been widely documented. However, there is still ongoing debate regarding the optimal limb lengths for achieving the best weight loss outcomes.

Objectives

To evaluate the impact of different BPD/DS limb lengths on weight loss outcomes.

Methods

A multicenter review of patients who underwent BPD/DS as a primary procedure between 2008 and 2022 was conducted. Patient baseline demographics, common channel (CC) length, Roux limb (RL) length and weight loss outcomes at 6-, 12-, 24-months were collected. Percent Total Weight Loss (%TWL) outcomes were compared using one-way ANOVA. Multivariate linear regression was used to determine %TWL predictors.

Results

A total of 720 patients (73.3% female, mean age 41.7± 9.7 years, mean BMI 55.0± 8.6 kg/m²) were included with mean follow-up of 21 months. %TWL at 24-months was higher in the 100-cm CC/150-cm RL length (44.1± 10.3%) and 125-cm CC/125-cm RL length (40.6± 10.6%) groups compared to the 150-cm CC/150-cm RL length group (35.9± 10.8%) (p<0.001) (Table 1). After adjusting for age, preoperative BMI, gender and diabetes status, CC length was independently associated with %TWL, whereas RL length and total alimentary limb length were not. For every 10 cm increase in CC length, there was significant decrease in %TWL by 1.84% at 24 months (p<0.001).

Conclusion

A shorter CC length of 100-cm is associated with greater weight loss in patients undergoing BPD/DS. Further studies are needed to determine whether weight loss outcomes are sustained on the longer term.

Table 1. %Total Weight Loss in Patients undergoing BPD/DS according to different limb lengths.

%TWL Mean (SD)	CC/RL Length			p-value
	100/150 (N=60)	125/125 (N= 596)	150/150 (N=64)	
At 6 months	30.3 (6.4)	23.7 (5.5)	26.4 (5.9)	<.001 ^a
At 12 months	39.7 (8.4)	35.4 (8.1)	34.4 (7.9)	<.001 ^a
At 24 months	44.1 (10.3)	40.3 (10.6)	35.9 (10.8)	<.001 ^a

^a One-way ANOVA. Abbreviations: CC, common channel; RL, Roux Limb; %TWL, Percent Total Weight Loss.

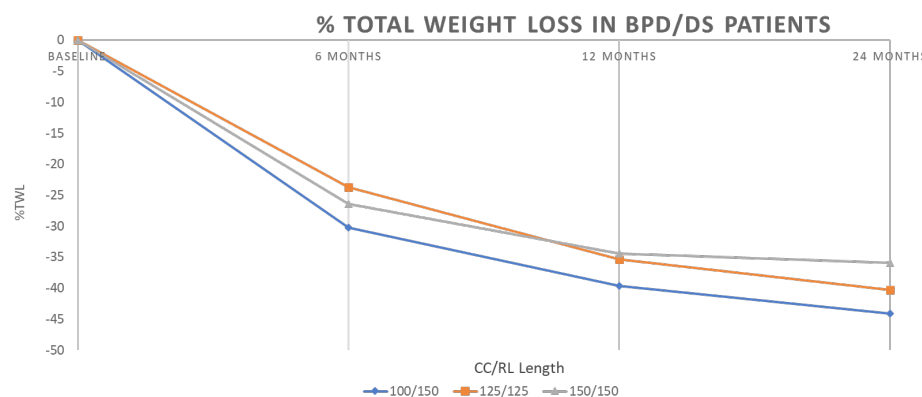


Figure 1. %Total Weight Loss in BPD/DS patients.

O-85

EFFECT OF RAMADAN FASTING ON WEIGHT, NUTRITIONAL STATUS, LIFESTYLE AND DEPRESSION AMONG BARIATRIC PATIENTS AT SELECTED GOVERNMENT HOSPITAL

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Background

Bariatric surgery (BS) has been an effective therapy for long-term weight loss maintenance and reduction in obesity-related morbidity. Bariatric patients are advised only to commence Ramadan fasting after a year post-operatively. Although the available research is sparse, many are still practising Ramadan fasting post-operatively, putting them at higher risk of malnutrition.

Objectives

To determine the effects of Ramadan fasting on weight, nutritional status, lifestyle and depression among bariatric patients at the selected government hospital.

Methods

This retrospective observational study evaluated 80 Malaysian patients undergoing elective bariatric surgery. The Epworth Sleepiness Scale (ESS) questionnaire, 3-day food record, hunger and satiety perception with a visual analogue scale (VAS), Malay language version of short-form International Physical Activity Level Questionnaire (IPAQ) and 9-item Malay language version Patient Health Questionnaire (PHQ-9) were used to determine the nutritional status, lifestyle and depression aspects. All information was collected at three-time-point, pre-Ramadan, during Ramadan and post-Ramadan fasting.

Results

The mean age of patients was 42, and 72% were female. The mean BMI pre-Ramadan was 40 kg/m². There was 55% of the patients reduced their weight after Ramadan. A greater desire for savoury foods during Ramadan was reported. The mean intake of calories and protein was reduced from 850 kilocalories to 670 kilocalories and from 46 g to 42g per day, pre-Ramadan to during Ramadan, respectively. There was no significant difference in IPAQ ($p>0.05$), PHQ-9 ($p>0.05$) and ESS score ($p>0.05$) during Ramadan fasting.

Conclusion

The nutritional status among Malaysian bariatric patients practising Ramadan fasting was adequate. No significant difference was observed in physical activity level, sleep quality, total sleep time, hunger and satiety perception, depressive symptoms and functional impairment of the patients pre- and post-Ramadan.

O-86
EFFECTIVENESS AND APPLICABILITY OF THE EARLY RECOVERY PROTOCOL IN SLEEVE GASTRECTOMY; RANDOMISED-CONTROLLED TRIAL

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Introduction

Sleeve gastrectomy is the most common method applied for obesity treatment. The ERAS protocol aims to reduce the patient's surgical stress response, optimize their physiologic function, and facilitate recovery. This study is aimed to determine the efficacy and safety of the ERAS protocol in patients underwent sleeve gastrectomy.

Methods

A single-center randomised-controlled study with patients who underwent sleeve gastrectomy between January 2020 and March 2021 was planned. Patients were randomized into those who underwent the ERAS protocol and those who didn't. The senior surgeon was blinded for the preoperative and postoperative period, whereas the other wasn't. The groups were compared in terms of length of hospital stay, duration of surgery, VAS scores, PONV effect scores and emergency service admissions within the first 30 days after surgery.

Results

A total of 96 patients were included in this study. Of these, 49 (51%) were in the ERAS protocol group and 47 (49%) were in the traditional treatment group. The mean ages of the patients in the ERAS and traditional treatment groups were 37.47 ± 10.11 years, and 35.77 ± 9.62 years, respectively. While the mean weight, mean height and mean BMI values of the ERAS group patients were 123.65 ± 16.58 kg, 164.12 ± 10.07 cm and 45.51 ± 3.75 kg/m², respectively, those of the traditional group were 121.11 ± 3.75 kg, 161.55 ± 9.31 cm, and 45.83 ± 5.88 kg/m², respectively. The ERAS group patients were hospitalized for a mean of 30.46 ± 11.26 hours, and the traditional group was hospitalized for a mean of 52.02 ± 6.63 hours ($p:0.001$). There was no significant difference in the first 30 days of emergency service admission in both groups ($p:0.498$). Both VAS and PONV effect scores at the 2nd and 12th hours of the ERAS group patients were lower ($p:0.001, 0.002, 0.001, 0.001$, respectively).

Conclusion

ERAS protocol shortened the hospitalization duration of patients and decreased the postoperative nausea, vomiting and pain scores. The application of ERAS protocol in patients who are scheduled to undergo LSG does not differ postoperative emergency department admissions compared to conventional method. ERAS protocol can be used safely and effectively in patients undergoing sleeve gastrectomy.

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EFFECTIVENESS OF ONE ANASTOMOSIS GASTRIC BYPASS AFTER FAILURE OF LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING – A COHORT STUDY

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Background

The Laparoscopic Adjustable Gastric Banding (LAGB) surgery has shown Suboptimal weight loss results in recent years and consequently has lost its popularity. The conversion procedure of choice is yet to be determined. Studies have repeatedly shown inferior results in conversion Bariatric procedure in comparison to primary ones, regardless the type of procedure.

Objectives

This study aims to evaluate the efficiency of the Laparoscopic One-Anastomosis Gastric Bypass (OAGB) surgery as a conversion procedure by comparing the outcome of a primary OAGB and conversion OAGB after failed LAGB.

Methods

A retrospective study compared 229 patients who underwent primary OAGB (pOAGB) to 39 patients who underwent a conversion OAGB (cOAGB), after failed LAGB, between 2018-2021.

Results

In the pOAGB group, the average %EWL after follow-up of 1, 2, and 3 years was 86.16, 89.3, and 87.8, respectively, and the average %TWL after 1, 2, and 3 years was 35.5, 35.1, and 35.6, respectively. In the cOAGB group, the average %EWL after 1, 2, and 3 years of follow-up was 69.79, 64.9, and 59.8, respectively, and the average %TWL after 1, 2, and 3 years was 26.6, 25.7, and 23.3, respectively. The overall early complication rate (30 days) in the pOAGB group was 5.2%, and in the cOAGB group was 2.6%. The improvement rate in comorbidities was high in both study groups, and the nutritional deficiencies were low in both groups.

Conclusions

OAGB is an effective and safe option as a conversion surgery after a failure of LAGB. However, in terms of weight loss, cOAGB showed inferiority to pOAGB.

Table. Postoperative weight loss.

	Primary OAGB		Conversion OAGB		P-value
Mean %TWL after one year	35.5+/-7.9	N=100	26.6+/-9.6	N=36	<0.001
Mean %EWL after one year	86.16+/-22.18		69.79+/-22.39		<0.001
Mean %TWL after two years	35.1+/-9.3	N=56	25.7+/-11.6	N=11	0.0071
Mean %EWL after two years	89.3+/-25		64.9+/-26.2		0.0042
Mean %TWL after three years	35.6+/-8.7	N=57	23.3+/-12.4	N=16	0.0029
Mean %EWL after three years	87.8+/-20.9		59.8+/-23.7		0.0005

%TWL percentage of total weight loss %EWL percentage of excess weight loss.
Standard deviation is represented as +/- SD.

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EFFECTIVENESS OF SEMAGLUTIDE FOR THE MANAGEMENT OF WEIGHT FOLLOWING SLEEVE GASTRECTOMY AND INTRA GASTRIC BALLOON THERAPY

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Background

Semaglutide is a glucagon like peptide-1 (GLP-1) receptor agonist. Currently there is very little research evidence on the benefits and safety of semaglutide in the management of weight following surgical and non-surgical intervention for obesity.

Objective

This study aimed to determine the clinical effectiveness of semaglutide as an adjunct therapy for managing weight regain and inadequate weight loss following sleeve gastrectomy (SG) and Intra-gastric balloon (IGB) therapy.

Methods

This is a retrospective analysis of patients who had SG between January 2011 to December 2021 and IGB between January 2019 to August 2022 and were managed using semaglutide for weight loss from August 2022 onwards. Appropriate descriptive and analytical statistics were used to examine and summarise the data.

Results

Data of 56 SG and 33 IGB patients were included in the analysis. The mean (\pm SD) pre-treatment weight and BMI of SG patients was 89.4 (22.1) kg and 33.7 (7.0) Kg/m² while of IGB patients was 86.6 (22.5) kg and 32.5 (5.4) Kg/m². Following semaglutide treatment of approximately three months, the mean post-treatment weight and BMI of SG patients was 79.5 (18.6) kg and 30.1 (6.2) Kg/m² whereas of IGB patients was 72.3 (10.6) kg and 27.6 (3.0) Kg/m². This represents a statistically significant mean weight loss of 9.9 kg ($p < 0.05$) in SG patients, corresponding to a loss of 11.1% of pre-treatment weight and mean weight loss of 14.3 kg ($p < 0.05$) in IGB patients, with a loss of 16.5% of pre-treatment weight. There was, however, no statistically significant difference in weight loss between both the treatments.

Conclusion

The use of semaglutide may be an effective adjunct treatment for weight optimization following SG and IBG. Further studies with larger sample sizes and longer follow-up periods are needed to strengthen the evidence on the benefits and safety of this treatment approach.

Keywords: Obesity, Sleeve-gastrectomy, Intra-gastric balloon, Semaglutide, weight management.

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EFFECTIVENESS OF SLEEVE GASTRECTOMY PLUS FUNDOPLICATION VERSUS SLEEVE GASTRECTOMY ALONE FOR TREATMENT OF SEVERE OBESITY: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Background

Laparoscopic sleeve gastrectomy (SG) is a widely performed bariatric surgery but is associated with an increased risk of gastroesophageal reflux (GERD) in the long-term. Addition of a fundoplication to LSG may improve lower oesophageal sphincter function and reduce postoperative GERD.

Objectives

This systematic review and meta-analysis aims to compare the efficacy and safety of SG plus fundoplication (SG + F) versus SG alone for the treatment of severe obesity ≥ 35 kg/m².

Methods

3 electronic databases were searched from inception till January 2023. Studies were included if they compared outcomes of SG + F versus SG in patients with severe obesity ≥ 35 kg/m². The primary outcome was remission of GERD postoperatively. Secondary outcomes were percentage of excess weight loss (%EWL), percentage of total weight loss (%TWL), postoperative complication rate, operative time, and length of stay.

Results

A total of 5 studies with 539 subjects were included. 212 subjects underwent SG + F while 327 underwent SG alone. The types of fundoplication include Toupet fundoplication in 2 studies (n = 178), Rossetti fundoplication in 1 study (n = 278), and Nissen fundoplication in 1 study (n = 38). The mean preoperative BMI was 42.6 kg/m². SG + F achieved higher remission of GERD compared to LSG (Odds Ratio (OR): 13.13, 95% Confidence Interval (CI): 3.54, 48.73 $P = 0\%$). However, %TWL was lower in the SG + F group (Mean difference (MD): -2.75, 95% CI: -4.28, -1.23, $P = 0\%$), while there was no difference in %EWL (MD: -0.64, 95% CI: -20.62-19.34, $P = 83\%$). There were higher postoperative complications in SG + F (OR: 2.56, 95% CI: 1.12-5.87, $P = 0\%$) as well. There was no difference in operative time (MD: 30.94, 95% CI: -5.02-66.90, $P = 99\%$) or length of stay between the 2 groups (MD: 0.46, 95% CI: -0.44-1.37, $P = 64\%$).

Conclusion

SG + F achieved better GERD remission, but is associated with lesser weight loss and increased postoperative complications compared to SG alone. Further studies are required to ascertain the overall clinical benefit of SG + F for patients with severe obesity.

O-90

EFFICACY AND SAFETY OF FONDAPARINUX FOR VENOUS THROMBOEMBOLISM PROPHYLAXIS IN BARIATRIC PATIENTS WITH DIFFERENT BMI

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Introduction

The American and European guidelines recommend Venous Thromboembolism (VTE) chemoprophylaxis post bariatric surgery, as those patients are in a moderate to high risk of developing thrombosis. Nonetheless, there is no consensus on the agent to be used for these cases. Fondaparinux, an inhibitor of factor Xa, has been used as in preventing DVT generally in postoperative patients, but no clear data about its role in bariatric patients.

Aim of the study

To study the efficacy and safety of Fondaparinux in prophylaxis against VTE in patients undergoing bariatric surgery.

Patients and methods

We reviewed the medical records of patients who underwent bariatric surgery in our unit between January 2015 and March 2018 and who had Fondaparinux for VTE prophylaxis. In our hospital protocol, we use pneumatic compression devices intraoperatively and Fondaparinux 2.5mg S.C. once daily for five days starting six hours post-surgery regardless of body mass index (BMI). We do not put any hemostatic agents routinely and we do not use any staple line reinforcement method. In addition, we use mechanical per operative DVT prophylaxis in all patients. We use abdominal drain in some, but not all cases.

Results

348 patients were included. 151 had sleeve gastrectomy (43.39%), 170 mini gastric bypass surgery (48.85%), and 9 had Roux en Y (2.58%). Mean BMI was 44.2kg/m². Eighty-four patients had no drain placed while 249 had a drain for one day, 10 had the drain for two days and two had drains for seven days. Mean preoperative and postoperative hemoglobin was 12.56 and 12.26 respectively. Three patients had increased bloody drainage in the drain that stopped spontaneously without any need for blood transfusion or surgical intervention. After one month follow up, there were no cases of VTE, other morbidity or mortality reported in these patients.

Conclusion

Fondaparinux, as a single daily dose of 2.5mg subcutaneous for five days, is effective and safe to be used in patients with different BMI after bariatric surgery in regards to VTE prophylaxis and risk of bleeding regardless of BMI. Further studies can be helpful in determining the exact role of Fondaparinux in bariatric surgery.

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EFFICACY OF SLEEVE GASTRECTOMY WITH CONCOMITANT HIATAL HERNIA REPAIR OR SLEEVE FUNDOPPLICATION FOR GASTROESOPHAGEAL REFLUX DISEASE

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Background

Although Sleeve Gastrectomy (SG) has been widely proven to be considerably effective in terms of weight loss and comorbidity resolution rates, there is still disagreement over how SG affects gastroesophageal reflux disease (GERD). The best option for patients undergoing bariatric surgery who are also affected by GERD continues to divide the community of bariatric surgeons. While concomitant hiatal hernia repair (SG+HHR) has been proposed as a mean of reducing the risk of GERD following SG with varying degrees of success, the addition of a fundoplication (SG+FP) has been suggested in recent years as a way to improve the lower esophageal sphincter’s competency.

Objective

The aim of this study is to systematically review and meta-analyze the efficacy of SG+HHR or SG+FP on GERD remission.

Methods

A systematic review was conducted, studies analyzing the effects of SG+HHR or SG+FP on postoperative GERD were included. The primary outcome was postoperative GERD rate and 12-month BMI change. Secondary outcomes were postoperative complications, and mortality. The PRISMA guidelines were used to carry out the present systematic review.

Results

Fifteen articles were included in the final analysis. A total of 1164 patients participated in the selected studies. Five hundred fifty-four patients underwent SG+HHR while 610 underwent SG+FP. Patients assigned to SG+HHR and SG+FP had a substantial GERD remission and a reduction in BMI post-operatively and ($p < 0.001$) (Figure 1). SG+FP patients had a significantly greater GERD remission ($p < 0.001$). The major postoperative complications were perforation, leak, and mortality (Table 1).

Conclusions

This study revealed that both SG with concomitant HHR and Sleeve-Fundoplication are effective in terms of reflux resolution and weight outcomes. Both strategies can therefore be suggested as a suitable management approach in subjects with obesity and concomitant hiatal hernia and/or GERD. Studies with extended follow-up and direct comparisons of these surgical approaches to conventional SG are warranted.

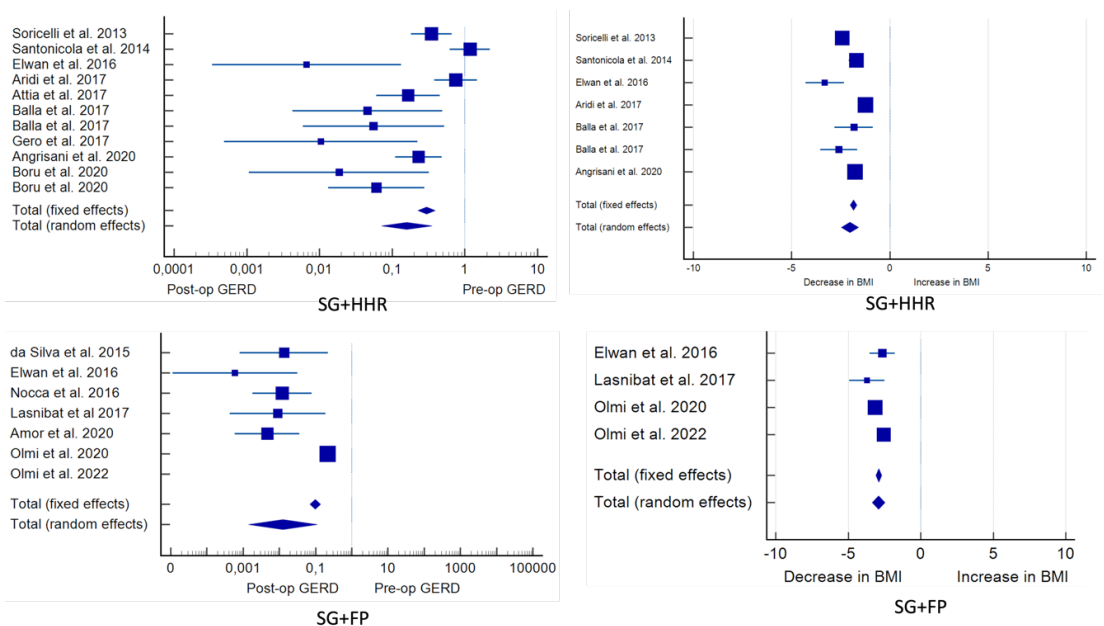


Figure 1.

Table 1.

	SG+HHR (n=554)	SG+FP (n=10)	p Value
Gastric Perforation, n (%)	1 (0.18)	19 (3)	0.002
Anastomotic Leak, n (%)	1 (0.18)	19 (3)	0.002
Mortality, n (%)	0 (0)	3 (0.5)	0.002

O-92

ENDOSCOPIC SLEEVE GASTROPLASTY: EXPERIENCE OF A BARIATRIC SURGEON AND MID-TERM RESULTS

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Background

Endoscopic sleeve gastroplasty (ESG) is an innovating and recent mini-invasive procedure. In the past years, it became an additional solution for the non-surgical treatment of obesity. In some countries, the development of this technique is nearly exclusive to endoscopist. As surgeons, we report here our experience over the past fourth years, and bring further data on mid-term outcomes.

Objectives

To evaluate the mid-term outcomes on weight loss of ESG.

Methods

This procedure was offered to all patients non eligible to metabolic surgery. All interventions were performed by a single bariatric surgeon. A prospective database was maintained from January 2019 to January 2023. The follow-up was systematically done at 1, 2 and 3 years following the procedure. Patients with more than 1 year of follow-up were included in this study.

Results

Hundred thirty-seven patients were registered in the database. Ninety-three had a follow-up of 1 or more year. These patients were mostly women (79 %), of 41 years old, with a mean body mass index before intervention of 33.9 ± 3.6 kg/m² (27.1 – 50.0). Fourteen (15.0 %) had a history of intra-gastric balloon. Ten (10.8 %) had at least one comorbidity related to obesity. The 1, 2 and 3 years follow-up were obtained for 93 (100.0 %), 53 (57.0 %) and 22 (23.7 %) patients, with 20.2 % of lost follow-up. The mean length of stay was 1 day (0 – 3). Severe morbidity (Clavien-Dindo \geq III) at 90 days was 1.0 % and minor morbidity (Clavien-Dindo \leq II) was 2.2 %. The mean total weight loss percentage (%TBWL) at 1, 2 and 3 years were 13.2 %, 9.5 %, et 6.4 % respectively. The mean excess weight loss percentage (%EWL) at 1, 2 and 3 were 54.8 %, 39.9 %, and 31.9 %, respectively. Two patients (2.2 %) had a second ESG.

Conclusion

This study shows favorable mid-term results for ESG.

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ENDOSCOPIC VERSUS SURGICAL GASTROJEJUNAL REVISION FOR WEIGHT REGAIN IN ROUX-EN-Y GASTRIC BYPASS PATIENTS: A 30 DAY UK COST-CONSEQUENCE MODEL

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Introduction

Despite the efficacy of bariatric surgery, 20-30% of patient's experience weight regain or insufficient weight loss 5 years after initial procedure. Dilation of the gastrojejunal anastomosis (GJA) commonly contributes to weight recidivism and can be corrected with endoscopic (Transoral outlet Revision – TORe) or surgical revision. Previous studies have associated TORe with significantly fewer adverse events and similar long-term weight loss when compared with surgical revision, but economic evaluations are required.

Material and Methods

A cost-consequence model comparing TORe and laparoscopic surgical revision of RYGB was developed from the NHS perspective to capture resource utilisation and adverse event cost up to 30 days. Clinical inputs were identified through a targeted literature review and validated by clinicians. Cost inputs were collected using NHS and NICE reference pricing.

Results

At 30 days TORe demonstrated significantly reduced costs compared to surgical revision of RYGB (£1572.24; $p < 0.01$). Cost savings were driven by a reduced OR time (34 mins vs. 98 mins) and Length of stay (0.2 Days vs. 1.8 Days) between TORe and surgical revision of RYGB. This resulted in cost savings of £1,041.76 and £464.00 respectively. Adverse events reported at 30 days included gastrointestinal leaks, bleeds and post-operative stenosis did not significantly differ between procedures but contributed a minor cost saving towards the TORe procedure.

Conclusion

TORe is cost saving compared to surgical revision of RYGB and may offer economic benefits to the NHS. Well conducted and longer-term costing studies measuring long term outcomes from a UK perspective are required to inform robust economic modelling and clinical decision making.

O-94

ENHANCED RECOVERY AFTER BARIATRIC SURGERY (ERABS) IN DEVELOPING COUNTRIES

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Background

Since its appearance in 1990s and to decrease length of stay (LOS), enhanced recovery after bariatric surgery (ERABS) emerged as a safe policy and many articles and protocols were published but more studies are required to standardize these protocols.

Aim

To assess feasibility and safety of (ERABS) in developing countries.

Method

A prospectively study conducted on 1247 patients (1046 had laparoscopic sleeve gastrectomy (LSG) and 201 had one anastomosis gastric bypass (OAGB); revisional surgery excluded from the study during a period between July 2017 and July 2022.

Results

ERABS protocol applied on 1247 patients, 708 female (56.8 %) and 539 males (43.2 %), with BMI kg/m² (47.8±9.09 kg/m²) and their age (38.7 ± 15.8 years). Drain (P-J) used in 134 patients (10.75 %), 119 (88.8%) removed in the 1st 24 hours and the remaining 15 (11.2%) removed within 5 days; 5 (1.2 %) patients discharge from theatre with Folly's catheter and 100% remove within 24 hours. 1206 patients (96.7%) return to their normal life within 3-5 days and the LOS in hospital between 16-40 hour (24.4 ±6.48) 43 patients (3.4 %) need extended hospital stay more than 24 hours (9 patients for hydration due to nausea and vomiting, 19 patient for blood transfusion due to bleeding, 9 patients due to tachypnoea, 6 patients due to their preference as they live in distal rural area). Nineteen (1.5%) patients had early post-operative bleeding, 12 of them treated successfully with blood transfusion and fresh frozen plasma (FFP) and Tranexamic Acid amp; while seven cases required re laparoscopy to control the bleeding. 22 patients (1.76%) need readmission, 9 patients due to vomiting and dehydration, 4 patients due to tachypnoea, 4 patients need reoperation within first week (2 of them due to intraabdominal sepsis due to leak and collection) and 2 patient due to stricture in which the procedure changed to single anastomosis sleeve jejunostomy SASJ. Three patients (0.24%) need stents to overcome leak. Two cases of mortality (1 massive pulmonary embolism and the other plication of leak).

Conclusion

ERABS protocol is feasible, safe and cost effective for metabolic and bariatric surgery in developing countries.

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ENHANCING CLINICAL SUCCESS IN BARIATRIC SURGERY PATIENTS THROUGH INTENSIVE DIETARY SUPPORT: A RETROSPECTIVE ANALYSIS IN AN ASIAN POPULATION

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Background

Weight loss surgery is a widely accepted treatment for obesity and related health conditions that result in sustained, consistent weight reduction and improvement of patients' comorbidities. After bariatric surgery, intensive dietary support remains essential to ensure adequate nutritional intake and weight loss. The research objective is to determine the difference between standard care versus intensive dietary support connected with successful outcomes after bariatric operations in an Asian population.

Objective

This study aims to research the part that intensive dietary support plays in contrast to standard care in altering weight loss and BMI change following bariatric surgery.

Methods

A group of 200 patients who underwent bariatric surgery in Malaysia were analysed for this study. The focus of interest in assessing weight loss and BMI changes at six and twelve months post-surgery. Secondary outcomes looked at postoperative complications between the two groups.

Results

At both the 6 and 12-month intervals, it was demonstrated that the group provided with intensive dietary support resulted in more significant weight loss and BMI change ($p < 0.03$). There is no significant difference in postoperative complications in both groups.

Conclusion

Intensive dietary support significantly contributes to better weight loss and BMI change than standard care following bariatric surgery in an Asian population.

O-96
EVALUATING NON-ALCOHOLIC FATTY LIVER DISEASE (NAFLD) IN A PATIENT WITH OBESITY USING TRANSIENT ELASTOGRAPHY AS A NON-INVASIVE TOOL

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Background

Non-alcoholic fatty liver disease (NAFLD) is a common liver disease associated with obesity. Currently, liver biopsy is the accepted standard for diagnosing NAFLD, but it is an invasive procedure that carries a risk of complications. Transient elastography (TE) is a non-invasive tool that measures liver stiffness and is being studied as a potential alternative to liver biopsy.

Objective

This study aims to compare TE with liver biopsy in detecting NAFLD in morbidly obese patients and to analyze the influence of gender, age, and BMI on the results.

Methodology

We included 224 patients who had laparoscopic bariatric surgery with liver biopsy. We performed TE before surgery using the FibroScan® device. We used Kleiner's histological scoring system to assess NAFLD from liver biopsy and CAP score from TE. We correlated CAP score with NAFLD score and demographic data, including age, gender, and BMI.

Results

According to Kleiner's scoring for steatohepatitis (NASH), 117 out of 224 patients (52.5%) had probable or definite NASH. CAP score of >300dB/m was found in 110 patients with a sensitivity of 88% and specificity of 60.9%. The area under the receiver operating characteristic curve (AUROC) of TE was 0.743 (95%CI: 0.59-0.89), indicating reasonable accuracy. CAP score and NAFLD score were significantly correlated ($p < 0.01$). Age, gender, and BMI did not affect CAP or NAFLD scores.

Conclusion

This study suggests that TE is a reasonably accurate and non-invasive method for diagnosing NAFLD in morbidly obese patients undergoing bariatric surgery. TE using the FibroScan® device can detect NAFLD with good sensitivity and moderate specificity. The results were not affected by age, gender, or BMI. TE could be considered as an alternative to liver biopsy for the diagnosis of NAFLD in morbidly obese patients. Further studies are warranted to confirm these findings in larger patient populations.

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EVALUATION OF A LONG BILIOPANCREATIC LIMB IN PRIMARY- AND REDO ROUX-EN-Y GASTRIC BYPASS: 10 YEARS RESULTS OF THE ELEGANCE TRIAL

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Background

Despite the fact that the Roux-en-Y gastric bypass (RYGB) is performed to treat morbid obesity on a broad scale, there is no uniform technique for this operation. Different limb lengths of the alimentary limb (AL) and biliopancreatic limb (BPL) have been used to achieve improved weight loss after surgery. Earlier randomized clinical trials by our group showed significantly more weight loss in patients having a long BPL Roux-en-Y gastric bypass (LBP-GB) in primary- and redo surgery in a medium-term up to four years after surgery. However, the effect on a longer-term after surgery is unknown.

Objective

To evaluate the effect of a LBP-GB on weight loss ten years after surgery.

Methods

A standard Roux-en-Y gastric bypass (S-GB; BPL 75 cm, AL 150 cm) was compared with a LBP-GB (BPL 150 cm, AL 75 cm) in primary and redo setting. In each study a total of 148 patients were randomized into the S-GB and LBP-GB groups. Weight loss, morbidity, resolution of comorbidities and quality of life (QoL) were measured ten years after surgery.

Results

Approximately 70% of the participants responded to the questionnaires at ten years. Mean TBWL was 26.0% ± 11.4% in the primary S-GB and 29.3% ± 10.3% in the LBP-GB ($p=0.154$). In the redo study, mean TBWL was 20.8% ± 13.5% in the S-GB and 24.8% ± 11.6% in the LBP-GB ($p=0.136$). No differences were found in complication rate, resolution of comorbidities or QoL.

Conclusion

Ten years after gastric bypass, both BPL of 75cm and 150cm resulted in excellent weight loss. In both studies, there was a tendency for more weight loss in the LBP-GB group, and this effect was more pronounced after revisional surgery. Resolution of comorbidities, complication rates and QoL were similar in all groups.

O-98

EVALUATION OF NON-INVASIVE LIVER FIBROSIS SCORES AFTER BARIATRIC SURGERY

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Introduction

Bariatric surgery improves steatohepatitis (NASH) and liver fibrosis. Different non-invasive scores (NIS) of liver fibrosis have been proposed to avoid the need for liver biopsy, whose performances after bariatric surgery (BS) are unknown.

Methods

Five NIS were calculated: ASAT only, NAFLD Fibrosis Score (NFS), FIB-4, AST-to-platelet-ratio index (APRI) and Hepamet fibrosis score (HFS), among patients who underwent BS at time of surgery (n=2,523), and one year after (n=626). Their performances (Area Under the Curve AUC, sensitivity, specificity), reduction at 1 year (T-test) and correlation with change of fibrosis (multivariable linear model) were evaluated. Evolutions of fibrosis up to 5 years, according to the best performing score, were compared between operations (multivariable mixed effect model).

Results

The AUC (95%CI) of the five NIS after the intervention were : ASAT 0.77 (0.70-0.84), NFS 0.68 (0.59-0.77), FIB-4 0.78 (0.72-0.85), APRI 0.78 (0.71-0.85) and HFS 0.79 (0.69-0.86). The scores decreased significantly 1 year after surgery (p<0.001) except for the FIB-4 who increased due to effect of age. Change of score was correlated to change in fibrosis in all NIS except NFS and FIB-4. According to HFS, at 5 years the decrease in liver fibrosis was greater after sleeve gastrectomy than gastric band (p=0.001) and similar after Roux-en-Y gastric bypass (p=0.65).

Discussion

After BS, the ASAT, APRI and HFS scores seem to be the most efficient to identify the remission of advanced fibrosis. Our results argue in favor of for a wider use of NIS to follow the evolution of liver fibrosis after BS.

O-99

EVALUATION OF THE INCIDENCE OF LOW TESTOSTERONE LEVELS IN YOUNG MALE ADULTS WITH SEVERE OBESITY – SINGLE CENTRE STUDY FROM INDIA

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Background

With the increase in obesity epidemic among children and adolescents in Asia, it is necessary to evaluate impact of obesity in such population. Low testosterone levels are known to be associated with obesity. This is the 1st study from Asia to evaluate incidence and magnitude of hypotestosteronemia in young adults with BMI more than 32.5kg/m² defined as morbid obesity in Asians.

Objective

To evaluate the incidence of hypotestosteronemia in young adults with severe obesity.

Materials and Methods

134 male patients with BMI more than 32.5kg/m², age of 18 to 30 years, who visited a bariatric facility were evaluated during 2017 to 2020 with BMI, total and free testosterone levels and clinical features of gynecomastia, hypogonadism, and thinning of pubic and armpit hair. Statistical analysis was performed using SPSS, Spearman's correlation coefficient and ANOVA test.

Results

60.4%,84/134 patients had low testosterone levels (below300ng/dl) and 23.9%,32/134 had levels between 300ng/dl to 400. 89.6% patients,120/134 had gynecomastia, 60.4%,81/134 had thinning of pubic and arm pit hair, 62,7% ,84/134 had hypogonadism. Testosterone levels had a decreasing trend with increase in BMI but was not significant statistically.

Conclusion

Severe obesity is one of the important etiological factors for hypotestosteronemia and its manifestations in young adults and the incidence is increasing far beyond reported in the literature. The findings of this study warrant more attention towards the subject, early identification, and treatment. Further research is necessary with larger studies.

O-100
EVALUATION OF WEIGHT LOSS AFTER ROUX-EN-Y GASTRIC BYPASS THROUGH A CLASSIFICATION BASED ON WEIGHT HISTORY

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Background

The effectiveness of bariatric surgery is often reported in terms of weight loss. There is no consensus regarding the metric used for this evaluation. The best method should allow more accurate comparisons across the broadest patient weight ranges and population characteristics.

Objectives

Evaluate weight loss in patients 2 years after Roux-en-Y Gastric Bypass (RYGB), through the application of a new proposal for weight loss assessment, based on the history of maximum weight.

Methods

Retrospective study involving 513 severe obesity patients who underwent RYGB from January 2012 to July 2020. The patients were evaluated for weight loss 2 years after surgery, using the proposed classification, with controlled, reduced or unchanged obesity as outcomes.

Results

The majority of the patients were female(73%). The mean age in preoperative was 37.1 years and the mean BMI was 41.4 kg/m². The mean percentage of total weight loss (%TWL) was 37.3%. The proposed classification showed significant associations with already validated metrics (p<0.001). Of the patients with Obesity Grade 3 preoperatively, 96.6% (233/241) had Controlled Obesity in the analysis 2 years postoperatively, with mean %TWL of 41.4%. Obese patients with BMI ≥ 50 kg/m² had the highest %TWL (47.9%).

Conclusion

Adequate weight loss is an essential predictor in the postoperative period of RYGB. The classification of obesity based on the maximum weight reached in the patient's life can help in this assessment. It is recommended to carry out randomized clinical trials to demonstrate the maintenance of long-term weight loss and its association with the resolution of comorbidities, reinforcing the validation of the classification.

O-101

EXAMINING THE SOCIO-DEMOGRAPHIC TREND OF A MULTI-ETHNIC POPULATION WITH OBESITY: WHAT CAN WE IMPROVE?

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Background

Obesity is a serious health problem in Malaysia with both its incidence and prevalence on the rise. The association of socio-demographic factors with obesity is well-documented, and targeted interventions are needed to reduce its prevalence.

Objective

This study examines the prevalence of obesity and socio-demographic factors that influence obesity trends in the Malaysian population.

Methods

The trend and distribution of obesity in the Malaysian population were derived from the National Health and Morbidity Survey conducted in 2015 and 2019, which essentially is a representative sample of adult Malaysians aged 18 years and above. Classification by World Health Organisation 1998 was used to define obesity, which is body mass index equal to or more than 30kg/m². Socio-demographic factors such as age, gender, ethnicity, marital status, education level, occupation and income were analyzed for their association with obesity using multivariable logistic regression models, and groups that remain the top contributor for obesity were identified.

Results

The prevalence of obesity in Malaysians increased from 15.1% in 2015 to 17.7% in 2019. The population having sustained highest obesity prevalence among their socio-demographic group from 2015 till 2019 were females as compared to males (24.7% versus 15.3%), and Indians (29.3%) followed by Malays (22.7%) in comparison with other ethnicities. Unpaid or homemakers (26.5%) had higher obesity rates than the employed (20.8%), while more married individuals (21.2%) suffered from obesity as compared to single people (16.3%). Furthermore, those with secondary education (21.2%) and tertiary education (19.4%) had higher obesity levels than those without formal education (17.4%), while middle income groups (21.5%) had more obesity issues than low income groups (19.9%). However, there was a shift of high obesity prevalence from those in their late fifties in 2015 (22.3%) to their late thirties in 2019 (25.3%). There were no significant differences between urban and rural communities (19.7% versus 19.8%).

Conclusion

Our study highlights the need for targeted interventions on groups susceptible to obesity in Malaysia, particularly females, Indians, married individuals, those with secondary education, unpaid or homemakers and middle income groups. These are necessary to reduce obesity prevalence, which are fundamental in building a healthier future.

O-102

EXCELLENT RESULTS IN TERMS OF WEIGHT LOSS AND TYPE 2 DIABETES CONTROL ARE MAINTAINED 20 YEARS AFTER ROUX-EN-Y GASTRIC BYPASS

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Background

Bariatric surgery induces significant weight loss and comorbidities resolution for patients with obesity, but there is limited evidence in long-term follow-up (up to 20 years).

Objectives

Analyse the results in terms of weight loss, comorbidities evolution, quality of life and causes of death 20 years after undergoing Roux-en-Y gastric bypass (RYGB).

Methods

A retrospective analysis of data from patients who underwent RYGB before 2002 was performed. Weight loss related variables, comorbidities evolution and quality of life were analysed during this period.

Results

87 patients underwent RYGB before 2002, follow-up rate was 72.4% at 20 years. The mean excess weight loss was 68% and the mean total weight loss was 38.8% at 20 years. Weight regain (>20%) occurred in 55.5% of patients at 20 years. Over 67% of patients with diabetes, 71% with hypertension, 100% with dyslipidemia, and 80% with obstructive sleep apnea, experienced improvement or remission. With regard to causes of death during this period, the main pathologies were cardiovascular events and cancer. The long-term quality of life in these patients was rated as good.

Conclusions

With 20 years of follow up, RYGB shows excellent results in percentage of excess weight loss and total weight loss (especially in patients with BMI ≥ 50 kg/m²). Durable improvement/remission of the studied comorbidities has been relevant (none of the patients with type 2 diabetes mellitus have insulin requirements).

O-103**EXPERIENCE IN REVISION SURGERY AFTER SADI-S IN THE LATE POSTOPERATIVE PERIOD**

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Background

At the present, there is an increase in the quantity of SADI-S. Therefore, the search for the most effective and safe surgical technique for correcting long-term complications after SADI-S is an urgent issue in current bariatric surgery.

Objectives

To analyse the types of revision interventions after SADI-S in the late postoperative period and the reasons that led to them.

Methods

390 cases with SADI-S with a narrow gastric sleeve (36 Fr) and a total loop length 250 cm (50 cases) and 350 cm (340 cases) in the period 2020-2022. Distribution by gender: men 56; women 334; aged 20 to 67 years. Mean BMI of 42, 30% of patients had a history of either type 2 diabetes mellitus or impaired glucose tolerance.

Results

Revision interventions were divided into two groups: 1 - correction of the malabsorptive syndrome and 2 - correction of weight regain and unsatisfactory anti-diabetic effect. In the first group was one cause (0,3%) of the development of hypocalcemia, and one cause of the development of hypoalbuminemia. Both patients included the entire length of the small intestine in digestion according to the author's method. In 1 case (0,3%) in patients with severe diarrheal syndrome, proximalization of the anastomosis was performed. In the second group, there was one cause (0,3%) with insufficient antidiabetic effect and one case (0,3%) of re-gaining of body weight in both patients. The method of revision surgery was the re-resection and Y-en-Roux reconstruction of anastomosis in the Duodenal-Switch type.

Conclusions

1. In the late postoperative period, the SADI-S operation with a narrow gastric sleeve and a long total loop of 250 and 350 cm has a relatively low percentage of complications. 2. SADI-S is an effective and relatively safe operation with the possibility of revision correction in the future, both in the direction of strengthening and weakening the mal-absorptive effect of the operation.

O-104

EXPLORING LONG-TERM QUALITY OF LIFE AFTER SLEEVE GASTRECTOMY VERSUS ROUX-EN-Y GASTRIC BYPASS IN PATIENTS WITH SEVERE OBESITY: A MULTICENTER STUDY

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Background

Laparoscopic sleeve gastrectomy (LSG) and Laparoscopic Roux-en-Y gastric bypass (LRYGB) are effective therapies to achieve significant long-term weight loss. However, long-term data comparing Quality of Life (QoL) between these two surgical techniques is lacking.

Objectives

To compare long-term QoL in patients with severe obesity after LSG and LRYGB.

Method

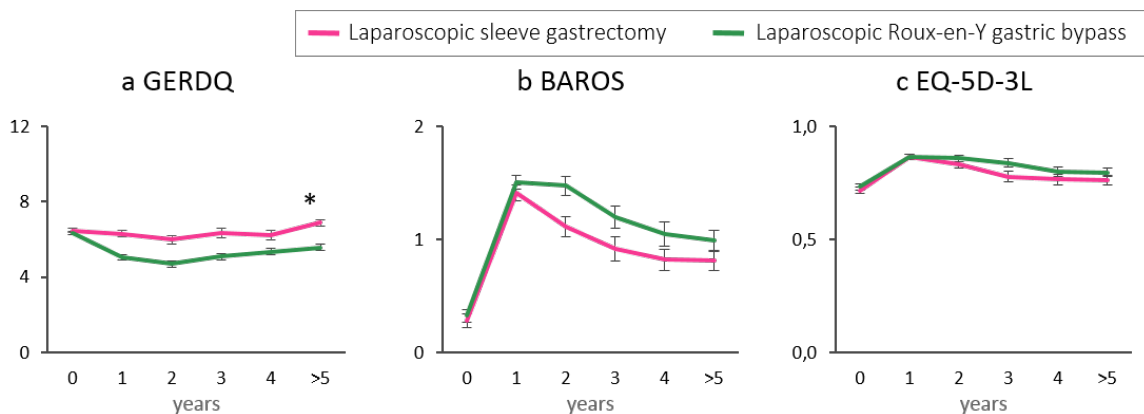
This multicenter open-label randomized controlled trial was conducted from 2013 until 2018 at two high-volume hospitals in the Netherlands. Patients eligible for bariatric surgery were randomized (1:1 ratio) between LSG and LRYGB with at least 5-year follow-up. The primary endpoint was percentage excess body mass index loss (EBMIL%). Secondary endpoints was QoL defined in various questionnaires, most important ones the Moorehead-Ardelt QoL questionnaire (BAROS) and Gastro-esophageal reflux disease Questionnaire (GerdQ). Dutch Trial Register NTR-4741.

Results

Data was analyzed in 628 patients (514 women (81.8%); mean age 43 [SD, 11] years; mean baseline body mass index 43.5 [SD, 4.7]) of which 486 (77.4%) patients completed long term. The estimated mean EBMIL% after ≥5 years was 60.0% [SD 25] after LSG and 68.3% [SD 27] after LRYGB (difference between groups, 8.3 percentage units (95%CI, -12.5% to -4.0%)). At baseline mean QoL score (BAROS) was 0.3 [SD 1.0] before LSG and before LRYGB. At ≥5 years the mean QoL score was 0.8 [SD 1.1] after LSG versus 1.0 [SD 1.2] after LRYGB, difference between groups 0.2 ((95%CI, -0.2 to 0.4), p = 0.115). At baseline the mean GerdQ score was 6.5 [SD 1.6] before LSG and 6.3 [SD 1.4] before LRYGB. At ≥5 years the mean GerdQ score was 6.9 [SD 2.2] after LSG versus 5.6 [SD 2.0] after LRYGB (difference between groups, 1.3 ((95%CI, 0.8 to 1.8) p <.001). All other QoL domains did not differ significantly (Figures).

Conclusion

For long-term weight loss, LSG was equivalent to LRYGB for patients with severe obesity. Patients after LSG had significant higher GerdQ scores after >5 years. However, there were no differences in all other QoL domains between both groups. GERD symptoms at baseline should be considered when choosing a bariatric procedure.



Abbreviations: GERDQ = Gastroesophageal Reflux Disease Questionnaire; BAROS = Bariatric Analysis and Reporting Outcome System; EQ-5D-3L = EuroQol-5Dimensions-3Level. All values are mean, whiskers show standard error of the mean (SEM). *p ≤ 0.05

Figure. Improvement in quality of life over time between groups.

O-105

EXPLORING WEIGHT STIGMA IMPACT ON PATIENTS SEEKING BARIATRIC-METABOLIC SURGERY: A PILOT STUDY

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Background

Weight stigma is the social discrimination of individuals based on their weight status, which can lead to negative health outcomes and disparities in various areas of life. Stigmatizing ideas and behaviours can be displayed by the very same people with obesity (*internalized stigma*). Weight stigma can lead to feelings of impotence or hopelessness, that might predispose to depression, anxiety and low self-esteem increasing the risk of eating disorders and suicidal behaviour.

Objectives

This study aims to describe stigmatizing experiences of people with obesity seeking bariatric-metabolic surgery. Both experiences occurring in public situations as well as those relative to internalized stigma will be investigated. The relationships between such experiences and mental dimensions: anxiety, mood and body dissatisfaction were analysed.

Methods

49 patients with obesity seeking bariatric-metabolic surgery (mean age 38.15±9.3 years; 30 females 61,2%, BMI 39,50±0,71) were enrolled. The pre-operative psychiatric assessment excluded severe mental disorders and detected eating behaviours through a semistructured-interview. Psychometric evaluation was: Stigmatizing Situations Inventory (SSI) for externalized stigma and Weight Bias Internalization Scale (WBIS) for internalized stigma. Anxiety, mood, and body dissatisfaction were assessed through Scala di Valutazione della Gravità del Disturbo d'Ansia Generalizzato (SVG DAG), Scala di Valutazione della Gravità della Depressione (SVG D) and Body Dissatisfaction subscale (BD) of EDI-2.

Results

Figure 1 shows descriptive statistics on SSI subscales. Simple linear regression was used to test whether SSI and WBIS scores significantly predicted anxiety, depression, body dissatisfaction and eating behaviour. The regression performed between SSI score and anxiety was statistically significant ($R^2=0.37$, $F(1,47)=27.77$, $p<.001$) (Figure 2). Similar results were obtained between SSI score and mood and body dissatisfaction. Anxiety, mood, and body dissatisfaction scores were positively predicted by WBIS score. SSI and WBIS scores were higher in patients with maladaptive eating behaviours such as grazing, nocturnal eating, sweet-eating, and binge than in patients with gorging.

Conclusion

Stigmatizing situations and internalized stigma are related to anxiety, depression and body dissatisfaction. Negative assumptions by others and medical figures are frequently reported by patients. Further research could identify critical psychological domains that could need pre-operative psychiatric-psychological interventions in order to improve the effectiveness of nutritional or surgical treatment.

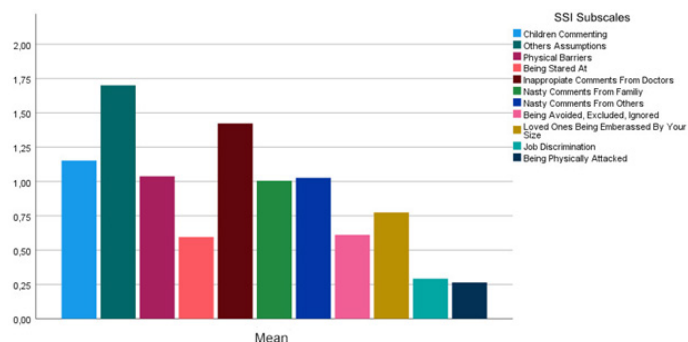


Figure 1.

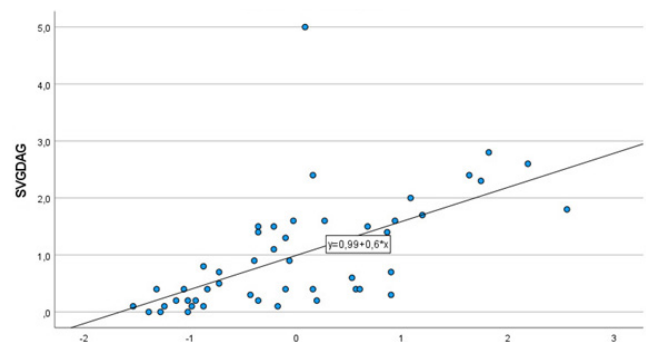


Figure 2.

O-106
EXPRESSION OF EXTRACELLULAR MATRIX-RELATED GENES IN VISCERAL ADIPOSE TISSUE CORRELATES WITH INSULIN RESISTANCE AND PREDICTS METABOLIC IMPROVEMENT AFTER BARIATRIC SURGERY

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Introduction

The role of different adipose tissues in alterations in extracellular matrix (ECM) remodeling in obesity is currently unknown, as well as their relationship with insulin resistance and outcomes after bariatric surgery (BC).

Methods

A comparative transcriptional analysis was performed using microarrays between the expression of ECM-related genes in four tissues of interest (subcutaneous adipose tissue, omentum, mesentery and peritoneum) between populations with (n=30) or without (n=13) obesity. The expression of the most representative genes was validated by RT-qPCR, and their relationship with different clinical variables and evolution after BC was analyzed.

Results

Microarray analysis showed overexpression of ECM-related genes in visceral tissues of people with obesity. VCAN, PRG4, SRGN, S100A8, CRISPL2, THBS1, ADAMTS 1, -4, -9, MMP19 and HAS1 genes validated their over-expression in these tissues by RT-qPCR, while expression differences were scarce in subcutaneous adipose tissue. Both epiploic and mesenteric expression of HAS1, ADAMTS4, THBS1 and S100A8 was associated with the presence of obesity and insulin resistance. In the mesentery, overexpression of ADAMTS family metalloproteinases was also detected in individuals with insulin-resistance. A correlation was observed between epiploic expression of HAS1, THBS1, VCAN and S100A8, as well as peritoneal expression of THBS1, ADAMTS1 and -4 and HOMA-IR in the subjects studied. After BC, epiploic THBS1 expression and mesenteric ADAMTS9 expression showed correlation with HOMA-IR variation 12 months after the intervention.

Conclusions

Our results point to a relationship between the over-expression of ECM-related genes in the visceral tissues analyzed and insulin resistance, as well as with metabolic improvement after BC. Our study highlights the possible contribution of mesenteric adipose tissue as well as mesothelial cells to metabolic dysregulation in people with obesity.

O-107

EXTREME TIREDNESS IN BARIATRIC SURGERY PATIENTS POSTOPERATIVELY LEADING TO WEIGHT GAIN AND HOSPITAL ADMISSIONS – WATCH OUT!

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Background

Weight gain and extreme tiredness post-operatively can be demoralising for bariatric surgery patients. Commonest causes include nutritional deficiencies which can improve following correction in primary care. Difficult cases of extreme tiredness can indicate unusual pathologies and require urgent specialist referral.

Objectives

To present two cases of extreme tiredness presenting to a specialist Bariatric Chemical Pathologist, referred by colleague Consultant Bariatric surgeon.

Methods

A retrospective review of patients' case notes was performed.

Results

Case 1: Female aged 33. Background: roux-en-Y gastric bypass (11 years prior) presented with excessive tiredness and weight gain. Weight: initial- 94kg BMI 40.7kg/m², lowest- 61.1kg 27.1kg/m², current- 85kg 37.8kg/m². Investigations: hypovitaminosis D (40nmol/L), high PTH (16.1) suggesting secondary hyperparathyroidism. B12, folic acid, iron, Hb, TFT, copper, zinc, selenium, DEXA scan and sleep study were normal. Following further specialist investigations, markedly elevated FSH, LH and low oestradiol indicated primary ovarian failure, explaining her symptoms. HRT was commenced following Gynaecology referral, which improved her menopausal symptoms and ability to lose weight. Following an iron infusion patient experienced dizziness, fatigue and myalgia and found to have hypophosphataemia (0.36 mmol/mol), treated with inpatient phosphate infusion. This case highlights unusual comorbidities as cause of weight regain and tiredness in post-operative patients. Case 2: Female aged 59. Background: sleeve gastrectomy (18 years prior), second-stage duodenal switch, osteoarthritis, osteopenia, asthma, secondary hyperparathyroidism, hypovitaminosis D. Presented with extreme fatigue. Weight: initial- 190kg BMI 70.6kg/m², lowest- 85.9kg BMI 31.55kg/m², current- 90.3kg BMI 34 kg/m². Low iron (5 umol/L) treated with iron infusion resulted in drop in serum phosphate (0.78 mmol/mol). A Denosumab infusion for osteoporosis resulted in hypocalcaemia, requiring inpatient calcium and phosphate infusions. Patient felt better with higher energy levels and ability to engage in physical activity to achieve weight loss.

Conclusion

One should have a high index of suspicion for unusual causes of extreme tiredness leading to weight gain and other comorbidities following bariatric surgery; this should be managed by timely referral to a Bariatric specialist unit. In the case of iron infusions, watch out for hypophosphataemia as cause of extreme tiredness which results from decreased phosphate reabsorption from the proximal renal tubules.

O-108
FACTORS INFLUENCING THE LONG-TERM REFLUX RATE (10 YEARS) AFTER GASTRIC BYPASS: ROUX EN Y GASTRIC BYPASS (RYGB) VERSUS ONE ANASTOMOSIS GASTRIC BYPASS (OAGB) 150

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Background

Roux en Y gastric bypass (RYGB) and one anastomosis gastric bypass (OAGB) are able to control the “obesity disease” at long-term. The management of long-term complications then becomes the challenge of these effective interventions. Reflux after gastric bypass appears as a frequent condition to manage, affecting 10-20% of patients.

Objective

The aim of this study is to identify the factors influencing the rate of reflux after gastric bypasses (RYGB and OAGB) and to compare the two types of bypass.

Methods

From January 2010 to December 2011, 422 patients underwent RYGB and 334 OAGB with a biliopancreatic limb of 150 cm. Only patients who underwent primary bariatric surgery were included; those undergoing concomitant procedures on the diaphragmatic hiatus were excluded. Operative data were collected prospectively. Postoperative data were obtained from the follow-up file supplemented by systematic telephone calls and standardized questionnaires for each patient at 120 months. Reflux after bypass is defined as a clinically diagnosed reflux needing treatment with medications or revisional surgery. Univariate and multivariate analyses were performed to identify the factors correlated to postoperative long-term reflux.

Results

The percentage of total weight loss (TWL) was 29.5% after RYGB and 33.3% after OAGB150 ($p < 0.05$) at 10 years follow-up. The rate of long-term reflux was 21%, the rate of disappearance of pGERD was 68% and the appearance of de Novo reflux was 10% and 6% for the two groups, respectively ($p > 0.05$). The surgical revision rate for disabling reflux was 0.5% after RYGB and 3.2% after OAGB ($p < 0.05$). At multivariate analyses, preoperative GERD, anastomotic ulcer, glycemic disorders and %TWL > 25 at 120 months were significantly correlated to postoperative reflux at 10 years follow-up.

Conclusion

Long-term reflux rate after bypasses remains high despite massive weight loss and seems to be correlated to several factors, including preoperative GERD, anastomotic ulcer, glycemic disorders and %TWL > 25 at 120 months. It is not influenced by the surgical technique. These findings open up new perspectives on the choice of techniques and the management of postoperative reflux after gastric bypass.

O-109

FAST TRACK BARIATRIC SURGERY WITH EXCELLENT OUTCOMES – THE FORERUNNER FOR DAY CASE BARIATRIC SURGERY?

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Background

Enhanced recovery and fast track surgery in bariatric patients is well established in high volume centres

Objective

To determine factors which influence length of stay and readmission rates in patients undergoing bariatric surgery in a high volume centre.

Methods

All patients who underwent bariatric surgery in a high volume centre were included. Outcomes in terms of complication rates, length of stay, one day discharge rate and 30 day readmission were analysed. Logistic regression analysis and Chi squared test were used.

Results

1009 patients (105 gastric band removal, 756 gastric bypass, 104 sleeve gastrectomy and 44 revision surgery) were included in the study. Demographics include: Age 46(20-77), M:F = 190-819; BMI – 44.3 (20.6-62); Wt. – 120.3 Kg (57.4 – 190.7). Median length of stay was 1.7 days (1-23) with 79% 1 day discharge. 783 (78%) patients did not have routine post op blood tests as they were assessed to be clinically well. 19 patients had complications (1.8%) with no mortality. 49 patients (4.8%) were readmitted (Mean 8 days after discharge; range 1-29). Logistic regression analysis revealed that presence of co-morbidities (OR = 1.92; 95% CI: 1.26-2.94; p=0.002) and history of previous abdominal surgery (OR = 2.22; 95% CI: 1.27 – 3.89; p = 0.005) increases risk of delayed discharge. One day discharge rate was lower in patients who underwent concomitant surgery along with bariatric surgery (70%) compared to patients who underwent only bariatric surgery (79%). The 30 day readmission rate was significantly higher in patients who had concomitant surgery in addition to primary bariatric surgery (Chi squared test p=0.032) and patients who failed the fast track protocol (p=0.000; chi squared = 13.2). 29/44 (65%) who underwent revision bariatric surgery were discharged on day 1.

Conclusion

Fast track surgery is becoming the norm even in complex bariatric patients undergoing surgery and may lay the foundation for development of day case bariatric surgery in the near future.

O-110
FEASIBILITY AND SAFETY OF LAPAROSCOPIC 3-PORT SLEEVE GASTRECTOMY IN ASIAN POPULATIONS WITH OBESITY

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Background

With the development of technology and experience, reduced port surgery is becoming more and more popular, and it is also gradually increasing in bariatric-metabolic surgery.

Objectives

The aim of this study was to evaluate the feasibility and safety of laparoscopic 3-port sleeve gastrectomy in populations with obesity.

Methods

We conducted a retrospective review of the electronic medical records of all patients who underwent laparoscopic 3-port sleeve gastrectomy (LSG-3) and conventional 4-port sleeve gastrectomy (LSG-4) between May 2021 and May 2022 at a single institution. Operative time, estimated blood loss, number of cartridges used, length of postoperative hospital stay, intra- and postoperative complications, readmission, and reoperation rate was assessed.

Results

Sixty-eight patients (31 patients undergoing LSG-3 and 37 patients undergoing LSG-4) were enrolled in this study. Body weight and BMI was significantly higher in LSG-4 group than in LSG-3 group, respectively (123.0 ± 29.4 vs. 104.3 ± 20.2 kg, $p=0.003$ and 43.8 ± 9.3 vs. 37.8 ± 7.2 , $p=0.004$). Operative time was significantly shorter in LSG-3 group than LSG-4 group (108.7 ± 17.8 vs. 120.8 ± 23.7 , $p=0.023$). Estimated blood loss and number of cartridges used is not significant between two groups (16.1 ± 17.8 ml and 5.8 ± 0.8 in LSG-4 vs. 12.1 ± 11.5 ml and 5.5 ± 0.6 in LSG-3). The length of postoperative stay was significantly shorter in LSG-4 than LSG-3 (2.4 ± 0.6 vs. 2.9 ± 1.2 , $p=0.034$). There was no difference between two groups in terms of intra- and postoperative complications, readmission, and reoperation rate. Only 1 case in LSG-3 group was reoperated due to postoperative bleeding. 4 cases were converted LSG-3 to LSG-4 for liver traction (2 cases), better vision (1 case), and bleeding control (1 case).

Conclusion

LSG-3 is feasible and safe in Asian populations with obesity.

O-111

FEASIBILITY AND SAFETY OF REVISIONAL SURGERY AFTER ENDOSCOPIC BARIATRIC PROCEDURES

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Background

Bariatric surgery (BS) is currently the most effective and durable intervention for severe obesity. Endoscopic procedures (EP) for weight loss are rapidly rising both in primary and revisional setting. Unfortunately insufficient weight loss (IWL) and weight regain (WR) are common and represent the most common indication for revisional surgery.

Objectives

The aim of this study was to evaluate the feasibility and safety of revisional surgery in patients underwent endoscopic treatment for weight loss including both primary (Endoscopic sleeve gastrectomy: ESG) and revisional (Transoral outlet reduction endoscopy: TORe) endoscopic procedures.

Methods

This is a multicenter retrospective study with a prospective maintained database of patients who underwent primary ESG or TORe that required revision surgery for IWL from 2016 to 2021. Baseline characteristics including age, sex, pre and post operative BMI, timespan between EP and surgery, and surgical technical approach were reported.

Results

35 patients were enrolled (16 female, mean age= 44,9 years). The mean BMI at EP was 40,4 kg/m²(range= 33-51). 26 patients underwent primary ESG and 9 pts underwent TORe for weight regain after RYGB. The timespan between EP and surgery was 20 months(range 6-48). At the last follow-up before surgery the TWL was 15% on average(range= 3-65%) with a mean weight regain of 15,4 kg. All the patients who performed ESG underwent laparoscopic sleeve gastrectomy. In the group of patients who underwent TORe were successively performed: 6 rygb resizing, 1 distal rygb and 2 banded rygb. No leaks and fistula, as well as no stenosis, were reported, only one bleeding in 2 POD that was conservatively treated. All patients underwent an esophagogastroduodenoscopy(EGD) in the pre-surgical setting. In order to tailor the staple line, intraoperative fluoroscopy control was used in 24 patients and intraoperative EGD in 3. At a mean follow up of 43,5 months patients are doing well with a TWL of 43,9%.

Conclusions

Based on our data bariatric surgery after primary or revisional endoscopic procedures is technically feasible and safe. However in 27 out 35 pts (77%) of patients, intraoperative fluoroscopy or endoscopy were needed to avoid tags and to keep out previous sutures from the staple line.

O-112

FETAL GROWTH AND BODY COMPOSITION IN PREGNANCIES AFTER METABOLIC SURGERY: DATA FROM THE AURORA PROSPECTIVE COHORT

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Background

As most metabolic surgeries are performed in women of reproductive age, pregnancies are increasingly common in this population. It is well established that the risk for fetal growth restriction is increased, but less is known about the clinical presentation and development of this problem. Furthermore, it remains unclear how fetal body composition is affected by maternal bariatric surgery.

Objectives

To use data from a prospective cohort of patients with a history of metabolic surgery (AURORA) to compare growth patterns and body composition between fetuses with a normal birth weight and those who are small-for-gestational-age (SGA).

Methods

Prospective data from patients with a history of either sleeve gastrectomy or gastric bypass surgery were used. All patients received standardized micronutrient supplementation. Serial ultrasound measurements were made from 24w of gestation onwards. Growth patterns and body composition of fetuses born with a normal weight were compared to those born SGA.

Results

Full data were available from 42 patients. 23 had gastric bypass, whilst 19 had sleeve gastrectomy. Eight women delivered an SGA infant (19%). Longitudinal ultrasound data showed a statistically significant difference in estimated fetal weight from 30w of gestation onwards. Abdominal circumference (AC) was significantly smaller in all measurements. Lastly, SGA infants showed a stagnation in the growth of the subcutaneous fetal tissue thickness (SCFTT). This resulted in a relative decline when SCFTT was compared to AC.

Conclusion

Growth trajectories differed significantly from 30w onwards between fetuses born normal weight and SGA. Furthermore, significant differences were seen in AC-expansion, SCFTT and SCFTT/AC-ratio. Our data, when confirmed in larger cohorts such as the upcoming GLORIA-trial (www.gloriaproject.be), aid in understanding the mechanism behind the increased risk for fetal growth restriction in pregnancies after metabolic surgery, opening up the possibility to predicting or even preventing this complication.

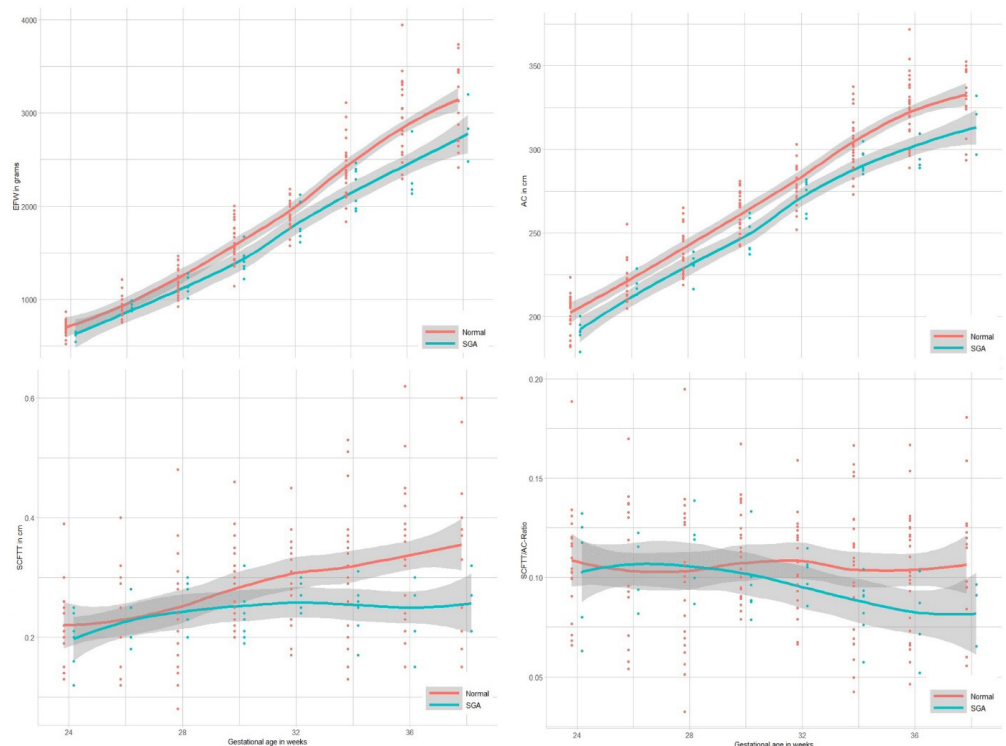


Figure. 1. Comparison of fetal growth trajectories and fetal body composition between fetuses born normal weight versus Small-for-gestational-age (SGA) in pregnancies after bariatric surgery. Data presented as trendlines with 95% Confidence interval. Points represent individual measurements.

O-113

FLATTERY: SAFETY AND EFFECTIVENESS OF CONVERSION FROM NON-RESPONDING SLEEVE GASTRECTOMY TO BANDED ROUX-EN-Y GASTRIC BYPASS

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Background

Weight recurrence, insufficient weight loss or functional problems after a Sleeve Gastrectomy (SG) are causes that may require conversional surgery. The SG is often converted to a Roux-en-Y Gastric Bypass (RYGB) or a single-anastomosis duodeno-ileal bypass (SADI). Especially for reflux, conversion to RYGB is considered effective. Current literature contains no studies which use the banding (MiniMizer) of the pouch. Therefore, this study aims to evaluate the safety and effectiveness of banded-RYGB after non-responding SG.

Methods

All laparoscopic SG to banded-RYGB conversions performed between January 2016 and December 2022 were included. The primary outcome was total weight loss (TWL) in percentage after 1 year follow-up. Secondary outcomes consisted of early and late complications according to the Clavien-Dindo classification, MiniMizer related complications, comorbidity resolution and cumulative TWL.

Results

We included 50 patients of whom 44 were female (88%). Mean pre-conversion BMI was 37.7±7.7 kg/m². Currently, 35 patients have reached the 1-year follow-up point of which 3 were lost to follow-up. This results in a follow-up rate of 91.4%. After 1-year mean additional TWL was 18.7% while mean cumulative TWL, calculated from sleeve gastrectomy, was 31.9%. Of the 30 comorbidities present at screening 5 remained unchanged (16.6%), 14 improved (46.6%) and 9 achieved remission (30%). A total of 10 short-term complications occurred in 8 patients whereby 4 were ≤CD2 and 6 ≥CD3a. Two MiniMizers were removed due to anastomotic leakage.

Conclusion

Conversion from SG to banded RYGB is successful regarding resolution of reflux symptoms, comorbidities, and additional weight loss after 1 year. The weight loss results are better compared to the current literature regarding conversion to non-banded RYGB. Compared to a primary RYGB the weight loss results are comparable. The results regarding complications are comparable to current literature.

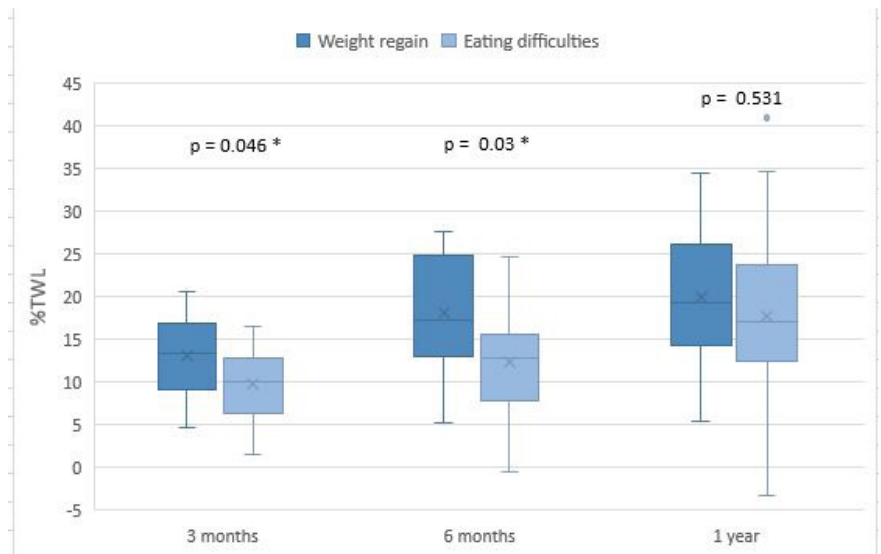


Figure. %TWL during 1-year follow-up.

Table. %TWL and cumulative %TWL during 1-year follow-up after conversion.

Variables	Follow-up	BMI (kg/m ²)	%TWL from conversion	(cumulative) %TWL from primary surgery
Baseline (conversion screening)	50 (100)	37.4 ± 7.2	-	16.5 ± 15
3-month follow-up	41 (93.2)	33.8 ± 6.5	11.2 ± 4.4	26.3 ± 12.4
6-month follow-up	35 (81.4)	31.8 ± 6.9	14.6 ± 6.8	30.2 ± 12.6
12-month follow-up	32 (91.4)	31.2 ± 7.1	18.7 ± 9.9	31.9 ± 13.3

O-114
FOOD ADDICTION, WEIGHT STIGMA AND SOCIAL PERCEPTION IN BARIATRIC SURGERY: A PILOT STUDY

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Background

Food addiction has been studied in eating behaviours promoting weight gain and it has been compared to substance addiction. It can have negative impacts on people with obesity, determining eating disorder psychopathology, depression and poor quality of life. The attribution of food addiction to lack of willpower might perpetuate stigmatizing attitudes towards obesity. Substantial associations of food addiction with emotional, social and cognitive impairment were also found in literature.

Objectives

This study aims to investigate: 1) How obese subjects live stigmatizing experiences according to their levels of food addiction in order to unveil a possible influence between these two phenomena; 2) Potential impairments in social perception that might be relevant in patients with food addiction.

Methods

49 patients with obesity seeking bariatric-metabolic surgery (mean age 38.15±9.3 years; 30 females 61,2%, BMI 39,50±0,71) were enrolled in this study. The pre-operative psychiatric assessment excluded severe mental disorders; a semistructured-interview detected the eating behaviours. Psychometric evaluation was performed: Stigmatizing Situations Inventory (SSI) for externalized stigma, Weight Bias Internalization Scale (WBIS) for internalized stigma and Body Dissatisfaction subscale (BD) of EDI-2 for body dissatisfaction, Yale Food Addiction Scale (YFAS2.0) for food addiction, *The Awareness of Social Inference Test* (TASIT-A) for the degree of social inference.

Results

Food addiction is related with lower scores at TASIT-A (Figure 1). Among the groups of patients with and without food addiction, SSI and WBIS scores were significantly higher in the first group (Figure 2). Food addiction was also related to maladaptive eating behaviours, such as nocturnal eating, grazing, binge and sweet eating. In this sample, food addiction wasn't significantly more frequent in subjects with a higher BMI or with a history of childhood obesity.

Conclusion

The correlation among food addiction, stigmatizing experiences and internalized stigma might suggest a mutual role of these dimensions in these patients' quality of life. These results are in accordance with literature data showing poorer social perception skills in patients with food addiction.

TASIT sections	With Food Addiction mean (ds)	Without Food Addiction mean(ds)	p
The Emotion Evaluation Test (EET)	21,67(3,11) N=12	22,70(3,95) N=20	.45
The Social Inference–Minimal (SI-M) test	41,25(6,02) N=12	46,5(5,96) N=20	<.05*
he Social Inference–Enriched test (SI-E)	45,33(5,91) N=12	49,05(3,63) N=20	<.05*

Figure 1. *significant difference between With-Food-Addiction and Without-Food-Addiction groups according to independent sample t-test.

Stigma and Body Dissatisfaction scales	With Food Addiction mean (ds)	Without Food Addiction mean(ds)	p
Stigmatizing Situations Inventory (SSI)	65,37(27,36) N=19	30,13(21,30) N=30	<.001*
Weight Bias Internalization Scale (WBIS)	59,37(13,20) N=19	37,13(11,83) N=30	<.001*
Body Dissatisfaction (BD)	51,16(5,31) N=19	44,63(8,59) N=30	<.01*

Figure 2. *significant difference between With-Food-Addiction and Without-Food-Addiction groups according to independent sample t-test.

O-115

FOOD AND HEALTH LITERACY IN BARIATRIC SURGERY CANDIDATES

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Background

For patients with severe obesity, metabolic-bariatric surgery (MBS) is the most effective treatment. Behavioral change, which requires food and health literacy skills, is essential for sustained postoperative weight loss. However, the level of these skills within this population is currently unknown.

Objectives

The aim of this study was to establish the level of food and health literacy in MBS candidates.

Methods

In this cross-sectional multicenter cohort study, self-perceived food literacy (SPFL) and Health Literacy Survey (HLS-Q16) questionnaires were deployed before MBS to assess food and health literacy. SPFL was scored on a 5-point Likert scale and the HLS-Q16 scoring varied between 0 and 16, establishing three levels of HL: inadequate (0–8), problematic (9–12), and sufficient (13–16). Univariate regression analyses were used to identify individual features associated with preoperative levels of food literacy.

Results

A total of 216 patients completed the preoperative questionnaires. The mean age of the study population was 44 years, 80% were female, and the mean was BMI 43 kg/m². The mean SPFL score was 3.49 (SD±0.43). In comparison, the mean SPFL score in the general population is 3.83±0.41. Health literacy was inadequate in three individuals (1.4%), limited in five individuals (2.3%), and sufficient in 208 (96.3%). In contrast, in the general population, 75.5% have sufficient health literacy. Better food literacy was related to better health literacy ($\beta=0.356$, 95%CI: 0.151 – 0.562, $p<0.001$) and female gender ($\beta=0.202$, 95%CI: 0.059 – 0.346, $p=0.006$). Food literacy was not related to age ($\beta=-0.025$, 95%CI: -0.142 – 0.091, $p=0.670$), preoperative BMI ($\beta=-0.040$, 95%CI: -0.157 – 0.076, $p=0.495$) or educational level ($\beta=0.051$, 95%CI: -0.076 – 0.179, $p=0.426$).

Conclusion

Preoperative food literacy in MBS candidates does not significantly differ from the general population. Food literacy skills are related to gender and health literacy, but not to age, BMI, and educational level. Further research is needed to determine whether (change in) food literacy skills are related to weight loss after MBS. Notably and surprisingly, health literacy skills were sufficient in almost all patients.

O-116

FOOD PREFERENCES AND MICROSTRUCTURE OF INGESTIVE BEHAVIOR BEFORE AND OVER 12 MONTHS AFTER ROUX-EN-Y GASTRIC BYPASS

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Background

Changes in diet selection has been suggested as one of the mechanisms involved in sustained weight loss following bariatric-metabolic surgery (BMS). Our group developed a novel device, the drinkometer, for the analysis of human ingestive behavior. The ingestive behavior parameters derived from this device comprise a set of macrostructural parameters: meal size, meal duration, drinking rate, and suck number; and a set of microstructural parameters: suck size, suck duration, suck rate, burst number, burst size, burst duration, burst rate, number of sucks per burst, inter-burst intervals, and inter-suck intervals.

Objective

To use an innovative method to directly evaluate the changes in food selection and macro- and microstructure of ingestive behavior of female patients during the first post-operative year after Roux-en-Y gastric bypass (RYGB).

Methods

Food preferences and ingestive behavior of female patients scheduled for RYGB (n=20, BMI 39.7 ± 3.3 kg/m²) and two control groups: with obesity (n=18, BMI $\geq 36.6 \pm 5$ kg/m²), and with healthy weight (n=12, BMI 22.7 ± 2.4 kg/m²) were assessed at baseline (4 weeks preoperative) and at 3, 6 and 12 months postoperative. The drinkometer device was used to record the ad libitum consumption of four different milk-based drinks with similar caloric density and viscosity, but different fat and sucrose content.

Results

One year after surgery, a significant body weight loss was achieved in the RYGB patients (108.7 ± 10.1 kg vs 71.9 ± 10.5 kg; $p < 0.001$) but not in the control groups. Changes in stimuli selection and difference in ingestive behavior parameters within (from baseline and follow-up measurements) and between (operated vs non-operated) patients will be presented and discussed at the conference.

Conclusion

The present study indicates that patients who underwent RYGB exhibited a significant decrease in energy intake during the first post-operative year. However, their macronutrients preferences were not significantly changed by the surgical intervention.

O-117

FREEDOM OF CHOICE IN THE UNITED STATES: PATIENT AUTONOMY IS DRIVING DECISION-MAKING

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Background

As the prevalence of obesity continues to increase worldwide, bariatric surgery remains the most effective long-term treatment. The ideal bariatric operation has been heavily debated as there is not always a consensus on the optimal surgical plan. Patients have turned to the internet for education prior to consultation with the surgeon, which can influence their decision-making.

Objectives

This study assessed the influence of internet and physician recommendations on patients' decision-making when selecting a bariatric surgical procedure.

Methods

We performed a prospective, single center study between May 2021 to May 2022 on candidates for sleeve gastrectomy (SG) and Roux-en-Y gastric bypass (RYGB). All patients completed a questionnaire during the initial consultation regarding choice of surgery and rationale for the choice. Patients were educated in a standardized fashion regarding each surgical approach with the use of visual aids by the surgeon.

Results

A total of 429 patients were evaluated for bariatric surgery within the study period. Of these patients, 77.8% were female with average BMI of 44.2kg/m². A majority of patients (74.1%) had a predetermined procedure (SG 81.4% vs RYGB 17% vs other 1.6%) in mind prior to surgical consultation based on internet research (67%), positive experiences of friends or family (29.2%), or negative experiences of friends or family (3.8%). Of the 53 patients that were counseled to change their pre-determined surgical choice, only 33.9% of patients ultimately followed evidence-based surgical advice to switch procedures during the preoperative consultation.

Conclusion

Patients' knowledge regarding bariatric surgery is heavily reliant on internet research, which can impact the patient-physician relationship. There has been a shift in the paradigm for primary pre-operative surgical education tool from surgeon recommendation to internet research. This affects the decision-making process for which procedure is best suited for the individual patients.

O-118

FREQUENCY OF CLINICALLY SIGNIFICANT FINDINGS IN THE SURGICAL PATHOLOGY SPECIMEN FOLLOWING LAPAROSCOPIC SLEEVE GASTRECTOMY: INSIGHTS FROM A LARGE SINGLE-CENTER EXPERIENCE

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Background

Preoperative endoscopy before elective bariatric surgery is not always performed, and in sleeve gastrectomy (SG), the surgical specimen is not always sent for postoperative pathological examination. There is limited data on the frequency of clinically significant findings in SG specimens or correlation with preoperative endoscopy.

Objective

We aimed to determine the frequency of clinically significant surgical pathology findings following SG and to evaluate for correlation with preoperative endoscopy.

Methods

We retrospectively reviewed 426 consecutive SG patients. Demographic information, as well as preoperative endoscopy and postoperative surgical pathology, was recorded. We determined if preoperative pathology had correctly identified the disease state in patients with clinically significant postoperative pathology results.

Results

The majority of patients were women (358 (84%)) and with at least one medical comorbidity (420 (98.6%)). Preoperative endoscopy was performed on 397 patients (93.2%). 373 patients had preoperative endoscopy and postoperative surgical pathology results available. 20/373 (5.4%) patients had potentially significant postoperative pathology, including intestinal metaplasia, autoimmune metaplastic atrophic gastritis (AMAG), gastrointestinal stromal tumors, and/or gastric cancer. The overall incidence of AMAG in the entire cohort was 2.3%. Preoperative gastric biopsies (to include gastric body) identified AMAG in nearly 1/2 of patients. Patients with clinically significant postoperative pathology results had a median [interquartile range] of 3[3-5] tissue blocks examined as compared to 3[1-3] for the remainder of the cohort ($p < 0.001$).

Conclusion

This is one of the largest studies describing clinically significant postoperative pathology after SG. AMAG, in particular, is of particular importance as it is associated with a 3-5-fold increase in risk for gastric cancer, with recommendations for routine endoscopic surveillance. These patients should generally not have a gastric bypass without consideration for resection of the gastric remnant. The incidence of significant post-operative pathology in this population is small but potentially clinically significant and requires validation in larger studies. We recommend wider sampling in preoperative endoscopy (body and antrum), especially in patients being planned for gastric bypass. Consideration should be given to the routine pathological examination of SG surgical specimens. Careful gross examination and targeted sampling of the surgical pathology specimen are required.

O-119

FUNCTIONAL LAPAROSCOPIC GASTRIC BYPASS WITH FUNDECTOMY AND GASTRIC REMNANT EXPLORATION (LRYGBFSE): 10-YEAR FOLLOW-UP RESULTS

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Background

The Laparoscopic Roux-en-Y Gastric Bypass (LRYGB) is the gold standard procedure for morbid obesity.

Objective/Introduction

Major limitation of the LRYGB is the challenging exploration of the gastric remnant and duodenum. The functional laparoscopic Roux-en-Y gastric bypass with fundectomy and gastric remnant exploration (LRYGBfse) was introduced in attempt to overcome this limitation. To date, its outcomes are debated and still unclear. The purposes of this study were to describe this novel technique and to analyze outcomes in term of weight loss, perioperative complications, and comorbid resolutions.

Methods

Multicenter prospective study. From January 2009 to December 2018 a series of morbidly obese patients underwent LRYGBfse. Outcomes in term of weight loss, Body Mass Index (BMI) decrease, percentage Excess Weight Loss (%EWL) improvement, and comorbid resolution were analyzed.

Results

Overall, 853 patients were enrolled in the study and prospectively followed. The preoperative mean body weight and mean BMI were 133.4 ± 28.6 kg and 48.2 ± 7.8 kg/m², respectively. No major intra-operative complications were reported. The mean postoperative in-hospital length of stay was 4 days (range 3-10), and the mean ICU length of stay was 1 day (range 1-2). Postoperative overall morbidity and mortality rates were 0.7% and 0%, respectively. Overall, 429, 226, and 84 patients completed the 5, 7 and 10-years follow-up. Mean BMI and %EWL were significantly lower compared to baseline ($p < 0.05$). Comorbid improvement or resolution was recorded in most of the patients. Banding removal was necessary in one patient 62 months after the index operation.

Conclusions

The LRYGBfse seems feasible and effective with durable results at 10-year follow-up. Endoscopic exploration of the gastric remnant with an easy access to the main duodenal papilla are unquestionable advantages.

O-120

GASTRIC BYPASS REVISIONAL SURGERY: PERCENTAGE EXCESS WEIGHT LOSS DIFFERENCES AMONG THREE DIFFERENT TECHNIQUES

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Background

Suboptimal weight loss or regain may occur in more than a quarter of patients after Roux-en-Y gastric bypass (RYGB). For this reason, revisional surgery is gaining increasing interest in the last decade.

Objectives

The aim of this study is to define the percentage of excess weight loss (%EWL) at one year among different techniques of RYGB revisional surgery. We hypothesized that the %EWL would be comparable among three techniques: Jejunojejunostomy distalization (JJD), Gastric pouch re-sizing (GPR), and the combination of both (JJD/GPR).

Methods

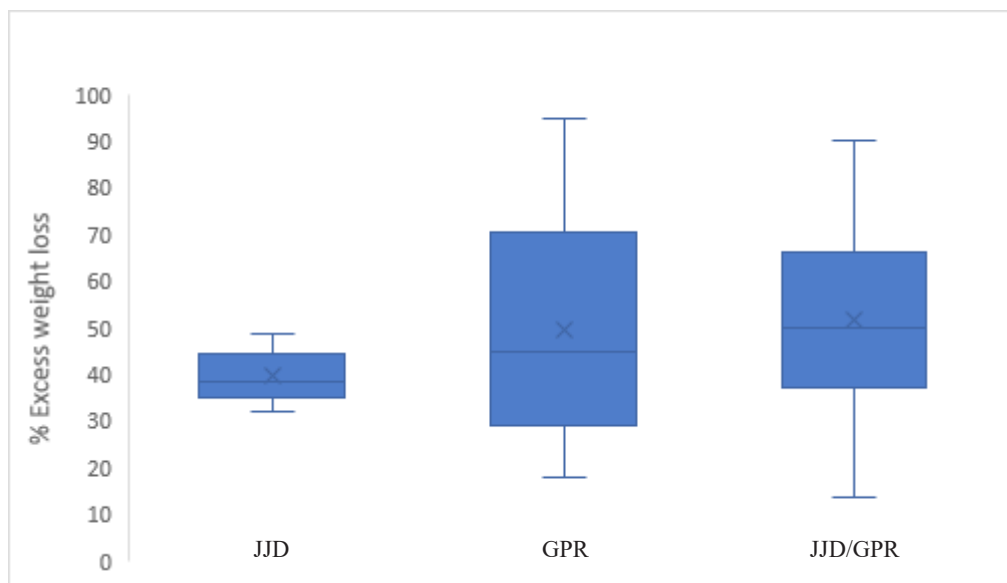
Retrospective cohort study in an MBSAQIP-accredited high-volume center, including patients who underwent revisional surgery after RYGB (2020-2021). The cohort was stratified by the revisional technique performed. Patient demographics, operative and bariatric outcomes were compared among groups using ANOVA and chi-square test for continuous and categorical variables, respectively.

Results

A total of 78 patients underwent revisional surgery after RYGB, with JJD in 8 (10.3%), GPR in 34 (43.6%), and JJD/GPR in 36 (46.2%). The indication for surgery was weight gain in 92.3% (N=72). The mean of %EWL at one year was 39.5% ± 6.0 for JJD, 49.7% ± 22.9 for GPR, and 51.5% ± 19.06 for JJD/GPR (p=0.47). There is no significant difference in %EWL between GPR and JJD/GPR. Mean BMI pre-op, at 1-, 6-, and 12-month follow-up were 44.9, 41.08, 36.88, and 35.12 kg/m², respectively. The median BP limb length encountered in JJD was 50.0 cm (IQR: 40-75 cm). Post-operative median length for JJD and the new common channel was 100 cm (IQR: 100-125 cm) and 277.5 cm (IQR: 250-302.5 cm) respectively. Three complications occurred, with only one requiring reoperation. No deaths reported to date.

Conclusions

This study demonstrates that the three techniques analyzed can be performed safely and have comparable outcomes in terms of %EWL at one year.



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GASTRIC BYPASS VS. SLEEVE GASTRECTOMY: WHICH PROCEDURE RESULTS IN BETTER QUALITY OF LIFE FOR PATIENTS WITH OBESITY?

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Background

Bariatric surgery is a commonly performed procedure for individuals with obesity and has been shown to result in significant weight loss and improvements in health outcomes. However, the impact of different types of bariatric surgery on health-related quality of life (HRQOL) is not well understood.

Objectives

This prospective study aimed to compare the effects of Roux-en Y gastric bypass (RYGB) and sleeve gastrectomy on health-related quality of life (HRQOL) among patients with obesity.

Methods

The study utilized the World Health Organization Quality of Life-BREF (WHOQOL-BREF) questionnaire to measure HRQOL in four domains: physical health, psychological, social relationships, and environment.

Results

The study found that both procedures were effective in improving HRQOL, with RYGB leading to greater improvements in physical health and social relationships, and sleeve gastrectomy leading to greater improvements in psychological and environmental domains. A total of 90 patients (35 gastric bypass, 55 sleeve gastrectomy) were recruited and assessed at baseline and at 1- and 3-months post-surgery. The study also found that both procedures resulted in significant weight loss and improvements in clinical outcomes, with no significant differences between the two procedures. Post-operative complications were also similar between the two groups.

Conclusion

These findings suggest that both RYGB and sleeve gastrectomy are effective in improving HRQOL among patients with obesity. The choice of procedure may depend on the specific needs and preferences of each patient, and further research is needed to explore the long-term effects of these procedures on HRQOL.

O-122

GASTRIC TWIST AFTER SLEEVE GASTRECTOMY – AN UNDERESTIMATED COMPLICATION?

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Background

Sleeve Gastrectomy (SG) is the most performed bariatric and metabolic procedure worldwide. Gastric twist and strictures are a rare, but important long-term complication. Management is reported to be endoscopic, and include different surgical options. No international guidelines exist.

Objectives

Conversion to Roux-en Y Gastric Bypass (RYGB) might in our opinion be the best revisional bariatric procedure in these patients.

Materials and Methods

Between 01/2019-12/2022 we encountered 10 patients with gastric twist and strictures after SG. All patients underwent upper endoscopy and laparoscopic conversion to RYGB. We retrospectively analyzed the outcome of these patients.

Results

10 patients (9 women, 1 man, mean age 41.1 ± 12.8 years) performed SG in mean 29.7 ± 17 months (range 9-60) prior to presentation in our hospital. Symptoms included dysphagia (5/10), vomiting (5/10), reflux (9/10). Upper endoscopy revealed twist and/or functional stenosis at incisura angularis in all patients and showed hiatal hernia in 4 patients, new-onset GERD C/D in 2 patients, new-onset Barrett esophagus in one patient. Mean BMI at SG was 46.06 ± 8 kg/m² and 28.15 ± 4.5 kg/m² at conversion to RYGB. In all patient's conversion was performed laparoscopically without intra- and postoperative complications. Mean operation time was 162 ± 36 minutes, mean length of stay was 3.8 ± 1 days. Symptoms revealed in all patients on POD1. In two patients vomiting returned 2 and 3 months after surgery, without any pathological diagnosis. Mean Follow-Up was 15.6 months (range 2-42).

Conclusion

Laparoscopic conversion of SG to RYGB might be a safe and symptom-solving procedure in patients with gastric twist and/or stricture after SG. Further data is necessary, to understand which is the best treatment pathway in these patients.

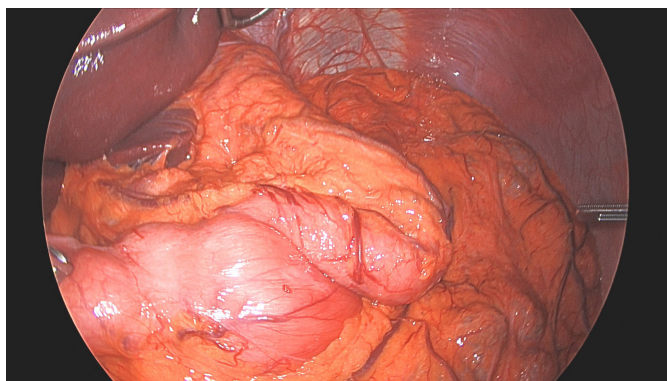


Figure 1. Gastric twist with stricture in different points of the gastric tube.

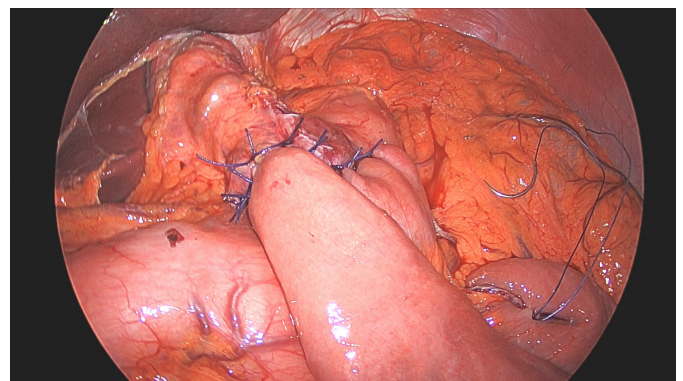


Figure 2. Gastro-entero anastomosis after conversion of SG to RYGB.

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GASTRIN-PRODUCING G CELLS IN THE GASTRIC POUCH OF ROUX-EN-Y GASTRIC BYPASS AND THE RELATIONSHIP WITH THE OCCURRENCE OF MARGINAL ULCERS

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Introduction

Bariatric surgery is considered the most effective therapy in the long-term treatment of obesity; however, marginal ulcers continue to impact the quality of life of patients. An increase in acid production in the gastric pouch has been implicated. Although gastrin is the greatest stimulant of acid secretion, until now, the presence of G cells retained in the gastric pouch related to the occurrence of marginal ulcers has not been evaluated.

Objective

Evaluate the density of G cells and parietal cells in the gastric pouch of patients undergoing gastric bypass and relate this to the occurrence of marginal ulcers.

Method

We retrospectively evaluated all patients who underwent gastric bypass between 2010 and 2020. Both patients with marginal ulcer who met the inclusion criteria and controls were selected from this same population. Endoscopic gastric pouch biopsies were evaluated using immunohistochemical study and HE staining to assess G cell and parietal cell density. The presence of other recognized risk factors for ulcers was also evaluated.

Results

A total of 1104 gastric bypasses were performed during the study period, among which, 572 (51.8%) of the patients underwent postoperative endoscopic follow-up. The incidence of marginal ulcer was 4%, and 3 patients required revision surgery due to a recalcitrant ulcer. The mean time for ulcer identification was 24.3 months. Gastrin-producing G cells were identified in the gastric pouch of patients undergoing RYGB. (Figure 1) G-cell count per high-power field (x400) was statistically higher in the ulcer group ($p < 0.05$). (Figure 2).

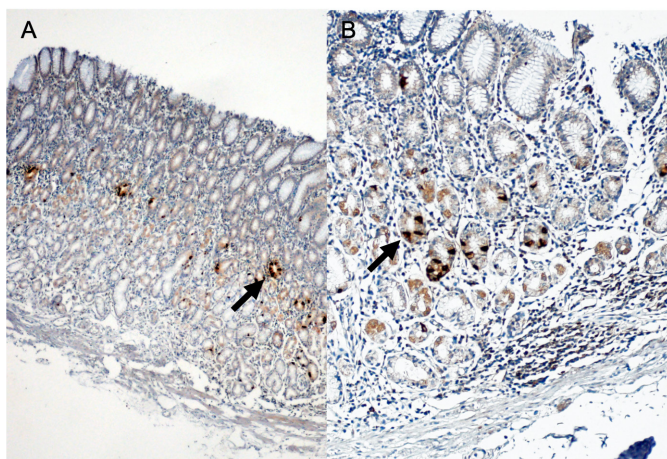


Figure 1. Immunohistochemical staining with anti-gastrin antibody to identify gastrin-producing G cells (arrows) in the gastric pouch of a patient with a marginal ulcer. (A original magnification x100; B original magnification x 400).

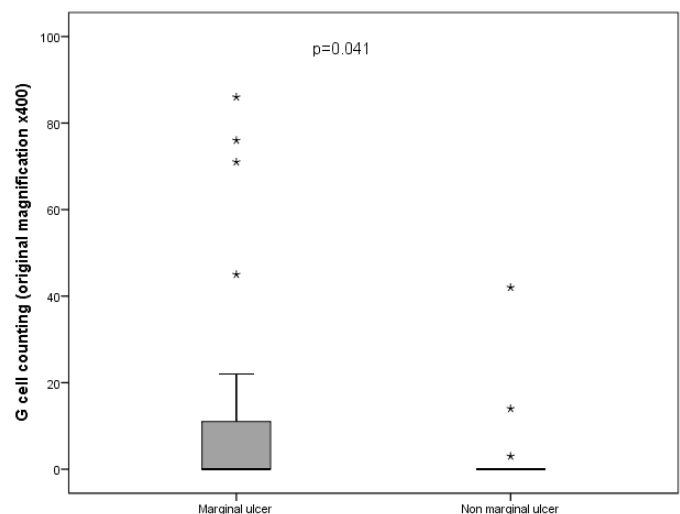


Figure 2. Box plot comparison between individuals with and without a marginal ulcer represented by median and interquartile range.

Conclusion

Patients with a marginal ulcer after gastric bypass present a higher density of gastrin-producing G cells retained in the gastric pouch. These cells remain susceptible to the stimulus of food passage and may contribute to maintaining the acid secretion stimulus in the gastric pouch.

O-124

GASTROESOPHAGEAL REFLUX DISEASE AS AN INDICATION OF REVISIONAL BARIATRIC SURGERY-INDICATION AND RESULTS-A SYSTEMATIC REVIEW AND METANALYSIS

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Background

Bariatric metabolic surgery (BMS) has an increasingly important role in the treatment of severe obesity since it is the most effective treatment modality for achieving sustained weight loss and improvement of quality of life. Weight loss, especially following BMS, improves GERD as well as gastrointestinal and general quality of life in many patients. However, depending on the type of bariatric procedure, surgery can worsen or even cause a new onset of GERD. There is a lack of surgical standardization or a surgical procedure that is preferred to another to treat GERD after primary BMS.

Objectives

The aim of this study is to provide a systematic review and meta-analysis on GERD after primary BMS and discuss the various procedures available to address this issue.

Methods

This systematic review and meta-analysis was designed based on the PRISMA guidelines and registered in PROSPERO. Pubmed, Web of Science, and Scopus were reviewed for articles published by April 1, 2021 using keywords as “revisional bariatric surgery, sleeve gastrectomy, GERD, Revisional surgery, ecc.

Results

A total of 48 studies of 772 examining 17437 patients were included in this systematic review and meta-analysis. Primary bariatric procedures included sleeve gastrectomy (SG), sg with Hiatal Hernia repair, OAGB, SADB-SG, BPD/DS, VBG, GB. In total 915 patients underwent Revisional bariatric surgery (RBS) due to GERD. RBS for GERD included seven different procedures, including conversion in RYGB, conversion in RYGB with simultaneous hiatal hernia repair, hiatal hernia repair with gastropexy, Braun Anatomosis, OAGB and sero-myotomy. After primary BMS, pooled estimation of a meta-analysis of studies reported a GERD of 7%. SG was with 83.5% the most reported primary, BMS procedure, which needed RBS due to GERD, followed by OAGB with 6.8%. Pooled estimation of a meta-analysis of the studies reported a GERD remission of 99% following secondary surgery. Although current literature reports different surgical treatment options, conversion in RYGB is the most performed RBS in treating GERD after primary BMS (73.2%).

Conclusion

This study underlines the importance of GERD, especially after SG, but on the other hand demonstrates the evidence that RYGB is an efficient surgical treatment for this long-term complication.

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GENDER DIFFERENCES AND HYDRATATION STATUS IN SUBJECTS WITH OBESITY TREATED WITH LIRAGLUTIDE

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Nowadays there is an increasing emphasis on precision medicine and tailored therapies also starting with discoveries about gender differences, from which different feedbacks can arise. Among the drugs approved for the treatment of obesity (Ob), liraglutide (a GLP-1 analogue) is among the most widely used and effective. Currently, however, there are still insufficient data on its effects on body composition (BC) changes during weight loss (WL) on gender difference.

The aim of our study is to evaluate, therefore, any gender differences in the BC of subjects with obesity treated with liraglutide.

27 subject with Ob (11M; BMI 46.2Kg/m²), attending at Outpatients Clinic of the I.P. “Diet Therapy in transplantation, renal failure and chronic pathology”, University of Naples Federico II, were enrolled and divided into two groups. Group A (subjects treated for 3 months with hypocaloric diet, HD and liraglutide therapy); Group B (subjects treated for 3 months with HD). Anthropometric measurements as well as BC assessment were performed at baseline (T0) and after 3 months of treatment (T1).

Conventional bioimpedance analysis (BIA) applied to any condition in which there is a violation of the assumption of constant tissue hydration (73%), such as Ob, propagates prediction errors. To solve these problems, the direct use of raw electrical data obtained from BIA analysis through bioelectrical impedance vector analysis (BIVA) was proposed and employed in the study.

At T1, the Δ BMI% in the two groups was not statistically significant (Group A 5.72% vs Group B 5.61% $p > 0,05$). In Group A, the vector length (VL) assessed by BIVA was significantly longer at T1 vs T0 ($p < 0.05$), a data not confirmed in Group B.

The two groups stratified by gender show a significant increased VL at T1 vs T0 only in men (244.6 vs 215.3, $p < 0,05$) belonging to Group A without change in PA. No significant difference neither in VL or PA in the other subgroups was found. So we hypothesize a reduction in ECW and FM without loss of BCM in male belonging to Group A.

Aware of the small sample size, our results suggest that liraglutide could have a diuretic effect in men with Ob. Further studies will certainly be needed to confirm these preliminary data.

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GUT MICROBIOTA AND ITS POTENTIAL ROLE IN IMPROVING METABOLIC OUTCOMES OF BARIATRIC SURGERY

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Background

Bariatric surgery (BS) induces changes in gut microbiota (GM) that have been considered as a factor associated with metabolic outcomes and weight loss.

Objectives

The present review aims to understand the possible association between GM and BS outcomes and present scientific evidence showing the beneficial role of gut microbiota in improving therapeutic outcomes of bariatric surgery.

Methods

The PubMed, Scopus, and Web of Science databases were searched for articles published in the last ten years. The 12 clinical trials were included after the exclusion criteria were applied. The included studies investigated to address the influence of GM alterations on host metabolism and the contribution of gut microbiota-derived metabolites.

Results

The GM composition seems to influence the prognosis of glucose homeostasis, insulin resistance, weight loss, changes in food intakes and motility in the gastrointestinal tract, and changes in nutritional status and diet therapy after BS. The literature has shown that a lower The Firmicutes/Bacteroidetes ratio is associated with greater weight loss and metabolic improvement. A higher Akkermancia muciniphila, Proteobacteria and Roseburia intestinalis abundance was related to improved insulin sensitivity and higher remission of type 2 diabetes (T2DM). In addition to intestinal bacteria, microbial metabolites appear to play an important role in the physiological and health changes regardless of the surgical procedure. Metabolites derived from microbial metabolism, including short-chain fatty acids, secondary bile acids, betaine and choline, may act synergistically and beneficially in human metabolism and BMI reduction after BS. In general, RYGB surgery seemed to result in a major modification of the GM composition compared to SG.

Conclusion

GM after BS has been considered a factor associated with metabolic improvements, weight loss and lowering the adverse events post-bariatric surgery. Therefore, several prebiotics, probiotics, and postbiotics intervention could be effective therapeutic strategies for patients who underwent bariatric surgery procedures for better clinical outcomes. Personalized medicine, because of the predictive value of GM, is another promising field. The possibility of a specific gut microbiota pattern that could predict T2DM remission or weight loss failure after bariatric surgery is a matter of great interest for future research.

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GUT MICROBIOTA AND METABOLIC STATUS SHIFT AFTER BARIATRIC SURGERY: THERE IS A DIFFERENCE BETWEEN R-EN-Y AND ONE ANASTOMOSIS GASTRIC BYPASS?

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Introduction

The comparison of effectiveness between R-en-Y gastric bypass (RYGB) and one anastomosis gastric bypass (OAGB/MGB) remains unclear, as well as the changes in gut microbiota (GM).

Materials

Prospective, cohort, multicenter study enrolling 96 patients with severe obesity, applying inclusion criteria, randomized between OAGB/MGB or RYGB. Fecal and blood samples were collected, pre- (T0) and 12 months postoperatively (T1). GM was determined by V3-V4 16S rRNA regions sequencing and homemade bioinformatic pipeline based on Qiime2 plugin and R packages. A standardized meal test was performed at T0 and T1 with 250 ml of liquid meal Oxepa (Abbott, Japan).

Aim

To evaluate and compare OAGB/MGB vs RYGB microbiota profile shift postoperatively and its impact on metabolic and nutritional status.

Results

54 patients completed the study, 27 for each procedure (females 61%). No significant differences were found at T0 for anthropometric and nutritional parameters, while a statistically significant anthropometrics' reduction was registered at T1, with a significant improvement of glucose and lipid profile, and significant reduction in vitamins and iron. Postoperatively fasting glucose, lipid profile, vitamins and minerals were not significantly different between the 2 procedures. Fasting GLP-1 was higher at T1, but postprandial values showed a lower peak both 60' and 120' after ingestion of the mixed meal., with no significant difference between the 2 groups. Examining the GM's alpha and beta diversity, *Firmicutes/Bacteroides* ratio increased postoperatively, mainly dependent on *Bacteroidetes* decreasing. Relative abundances evaluation highlighted those main differences between the identified clusters (group A 29 subjects, group B 14 subjects and group C 10 subjects) were dependent on variation in *Bacteroidetes* and *Firmicutes*. A different trend was detected at *Phylum* level between T0 and T1 of each cluster. *Bacteroides* and *Streptococcus* genera appeared mainly changed between the three groups (both showing $p < 0.001$).

Conclusions

The emergence of slightly different GM profile postoperatively may be related to clinical condition or may play a key role in the long-term outcome and may represent a biomarker to follow bariatric surgery's outcomes. No difference between the two bypass techniques were found in GM profile or other examined metabolic parameters one year postoperatively.

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HEALTHCARE EXPENDITURES IN PERSONS WITH TYPE 2 DIABETES UNDERGOING BARIATRIC-METABOLIC SURGERY

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Background

Bariatric-metabolic surgery (BMS) is one of the most effective treatment options for people with obesity and type 2 diabetes mellitus (T2D). Although the clinical effects are clear, information on changes in healthcare expenditures after BMS in people with T2D is scarce.

Objective

In this study, we used the Dutch national all-payer claims database (Vektis) to evaluate healthcare expenditures in people with T2D who underwent BMS.

Methods

Data was collected from Vektis, containing all nation-wide health insurance reimbursement data. The study population (BMS group) was selected based on the reimbursement codes for T2D care and/or use of glucose lowering medication and BMS in 2016. This group was matched in a 1:2 ratio with a control group, based on age, gender and healthcare expenditures in 2013 and 2014. Healthcare expenditure data was collected for 2013-2019.

Results

In total, 1,751 patients were included in the BMS group and 3,502 in the control group. Between 2016 and 2019 expenditures in the BMS group stabilized at €3.120/year, compared to an 8% increase in the control group until €3.434/year. Pharmaceutical expenditures decreased 28% in the BMS group to €494/patient in 2019 and increased 55% in the control group to €936/patient in 2019. In the BMS group, 67.1% did not have any medication expenditures for T2D in 2019; in the control group this share was 13.3%. The percentage of patients with healthcare expenditures related to microvascular complications increased in the control group, but not in the BMS group.

Conclusion

In the first three years after BMS, total healthcare expenditures of patients with T2D stabilized, while in a matched control group healthcare expenditures rose. Medication use for T2D decreased in patients who underwent surgery. Longer term research into healthcare expenditures is needed to assess cost-saving over time.

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HIGH-RESOLUTION MANOMETRY IS A VALUABLE TOOL IN THE INVESTIGATION OF ADVERSE SYMPTOMS IN POST-BARIATRIC PATIENTS

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Background

Obesity is a major global health issue that is increasing in prevalence. Bariatric surgery is an effective treatment of excess weight loss, but there is evidence that gastro-oesophageal reflux disease (GORD) and oesophageal dysmotility are associated with laparoscopic adjustable gastric band (LAGB), laparoscopic sleeve gastrectomy (LSG) and Roux-en-Y gastric bypass surgery (RYGB). Oesophageal dysmotility and GERD then manifest as symptoms of reflux or regurgitation and dysphagia post-bariatric surgery.

Purpose

The role of high-resolution manometry (HRM) as a tool to evaluate and manage these symptoms, particularly in the post-bariatric surgery population, has yet to be defined or explored. This study proposes HRM as a useful adjunct in the assessment of symptomatic post-bariatric surgery patients, to complement traditional anatomical studies (endoscopy, barium swallow and three-dimensional computed tomography (3D CT)).

Methodology

A retrospective case series was conducted on 83 consecutive post-bariatric surgery (LAGB or LSG or LRYGB) patients from a single bariatric practice between 2012 to 2021 who presented with symptoms of reflux and dysphagia. They underwent anatomical studies (endoscopy and/or barium swallow and/or 3D CT) and functional studies with HRM.

Results

A total of 83 patients (80.7% female) were investigated with at least one anatomical study and functional study with HRM during this period. Patients reported reflux or regurgitation as the main symptom in 41 (49.4%) cases and dysphagia in 28 (33.7%) cases. Other symptoms, including abdominal pain; loss of restriction; food intolerance and vomiting, accounted for the remaining 14 cases (16.9%). In 46 patients (55.4%) functional and anatomical studies corresponded with the consistency of either normal (14 patients, 16.9%) or abnormal results (32 patients, 38.6%). 23 patients (27.7%) had abnormal anatomical but normal functional studies. Of particular interest, 50% (14 out of 28 patients) of patients with normal anatomical studies were found to have abnormal functional results on HRM.

Conclusion

The utility of HRM to investigate symptomatic post-bariatric surgery patients identified abnormal findings in a significant proportion of patients with normal anatomical studies. These findings indicate that manometry may be a useful adjunct to detect functional disorders that may be missed by endoscopy, barium swallow or 3D CT investigations.

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HIV, OBESITY, AND SLEEVE GASTRECTOMY: A 4 YEAR SHARP INCREASE IN BARIATRIC CASES

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Background

Obesity is a global epidemic and is associated with significant morbidity. There are multiple treatment options of which sleeve gastrectomy is the most common around the world. Advances in antiretroviral therapy have largely arrested the progression of the human immunodeficiency virus (HIV) to AIDS and these patients can have a normal life expectancy and are developing standard diseases such as obesity. We have seen a sharp increase of HIV positivity in our bariatric surgical patient population despite an overall decreasing HIV rate in the U.S.

Objectives

To report our experience in cases involving HIV-positive patients undergoing sleeve gastrectomy for obesity and to advise what bariatric surgeons should consider in treating this population including unique medication and diet requirements.

Methods

Retrospective review was done of 1,964 consecutive sleeve gastrectomy patients from 2019-2022. Data collected included baseline demographics, comorbid resolution, surgical complications, morbidity, mortality, and weight loss. Infectious disease clearance and undetectable counts were required preoperatively.

Results

There were 24 HIV-positive patients who underwent the procedure (2019 2 cases, 2020 4 cases, 2021 5 cases, 2022 13 cases); 85% (20/24) were women and 96% (23/24) were African American. There were no serious postoperative complications in this cohort. Weight loss was similar between HIV-positive and non-HIV-positive patients. In HIV-positive patients at 6 months, there was 51% EWL (excess weight loss) (BMI 38.4 kg/m²) and at 1 year there was 65.1% EWL (BMI 35.6 kg/m²). For all other patients during that period, at 6 months there was 49.0% EWL (BMI 35.5 kg/m²) and at 12 months there was 69.8% EWL (29.6 kg/m²).

Conclusion

HIV positivity is sharply increasing in the bariatric population. Outcomes and compliance following sleeve gastrectomy for obesity in HIV-positive patients are similar to those in non-HIV patients. Fundamental medication and dietary considerations are critical in this patient cohort to maintain antiviral effectiveness. Antiviral therapy (AVT) absorption can be highly dependent on food types and an acid rich or high fat environment. Absorption after sleeve gastrectomy is less altered than with other bariatric procedures. Well-controlled HIV positivity should not alter surgical decision-making regarding candidacy for bariatric-metabolic surgery.

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HOW EFFECTIVE IS TRANSVERSUS ABDOMINIS PLANE (TAP) BLOCK IN REDUCING PAIN AND OPIOID NEEDS FOLLOWING BARIATRIC SURGERY?

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Background

Studies have found that ultrasound-guided (USG)-TAP block reduces pain and opioid needs following bariatric surgeries. Based on these reports, we incorporated USG-TAP block into our multimodal analgesia (MMA) regimen. However, after failing to observe an efficacious effect of USG-TAP block on postoperative pain management, we suspended its use. In an effort to assure our earlier observations were not in error, we have reexamined pain management and opioid needs of patients since discontinuation of the procedure.

Objective

To compare postoperative pain scores and opioid needs between bariatric patients who had a TAP-Block and those whose surgery followed inclusion of the procedure (Post TAP-Block).

Methods

The study was a retrospective analysis of surgeries performed with or without TAP-Block between April 2022 and December 2022 (n=149). Approximately 65% of surgeries were Roux-en-Y gastric bypass (RYGB) and 35% sleeve gastrectomy (SG). All surgeries were performed by the same surgeon using a 'totally' robotic approach (da Vinci Xi platform). Outcomes included: 1) patient characteristics, 2) operative (op) times, 3) length of the hospital stay (LOS), 4) peri- and postoperative complications, 30-day readmissions, reoperations, mortality, and 5) pain management. Pain scores and opioid usage of patients were assessed in the postoperative ambulatory care unit (PACU) and during the hospital stay.

Results

Age (45.3 vs. 45.9 y), weight, and BMI (45.9 vs. 45.7) did not differ significantly between the TAP-Block (n=75) and Post TAP-Block (n=74) patients, respectively. Op times (95.8 vs. 93.5 min) and LOS (1.14 vs. 1.13 d) were also similar, as were postoperative complications, reoperations, and readmissions. Pain scores (highest and 24-hr average) during the hospital stay did not differ significantly with or without TAP-Block nor did 24-hr opioid needs (7.07 vs. 7.09 mEq) or the percentage of patients who did not require opioids for pain management (39% vs. 41%). Surgery expenses were significantly higher with TAP-Block due to the added costs of the procedure (\$713.31).

Conclusion

TAP-block adds to surgical expense and has no additive benefit to our MMA regimen in reducing postoperative pain and opioid usage.

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HOW WELL DO BARIATRIC SURGERY PATIENTS OBJECTIVELY ADHERE TO 24-HOUR MOVEMENT GUIDELINES PREOPERATIVELY AND WHAT FACTORS RELATE TO BETTER ADHERENCE?

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Background

Metabolic and bariatric surgery (MBS) patients are advised to perform regular physical activity (PA) to optimize postoperative outcomes. However, this singular focus on PA neglects the importance of other movement behaviors (sedentary behaviour, sleep) during a 24-hour day. The concept of a 24-hour healthy movement cycle has been adopted by several countries with recommended targets for sleep (7-9 hours/night), sedentary time (ST; <9 hours/day), and moderate-to-vigorous PA (MVPA; ≥ 150 minutes/week). This study is the first to objectively evaluate adherence to 24-hour movement guidelines among MBS patients.

Objectives

To evaluate adherence, including degree and correlates of adherence, to 24-hour movement guidelines among preoperative MBS patients.

Methods

Participants (n=103; 80.6% women; 40.3 \pm 9.1 years old; BMI=45.3 \pm 6.5 kg/m²) wore an accelerometer for 24 hours/day on 7 days before MBS. We calculated: (1) proportions of patients who met recommendations (sleep, ST, and MVPA using both non-bouted [MVPA accrued in bouts <10-minutes] and bouted [MVPA accrued in bouts ≥ 10 -minutes; a proxy for exercise] definitions); and (2) index scores to represent degree of adherence to recommendations (e.g., for MVPA recommendations, a score of +1=MVPA exceeded recommendations by 10% vs. a score of -1=MVPA fell 10% below recommendations). Multiple linear regression evaluated associations of sociodemographic and anthropometric characteristics with adherence.

Results

Participants on average: performed 214 \pm 150.9 non-bouted MVPA minutes/week and 65.4 \pm 87.2 bouted MVPA minutes/week, with 59.2% (n=61) and 14.6% (n=15) meeting recommendations according to non-bouted and bouted definitions, respectively; accumulated 793.0 \pm 199.5 ST minutes/day, with 11.7% (n=12) meeting the recommendation; and slept for 340.2 \pm 94.0 minutes/day, with 15.7% (n=16) meeting the recommendation. Participants exceeded the non-bouted MVPA recommendation by 43% (4.3 \pm 10.1) but fell short of the bouted MVPA recommendation by 56% (-5.6 \pm 5.8), the ST recommendation by 47% (-4.7 \pm 3.7), the sleep recommendation by 33% (-3.3 \pm 1.8), and all recommendations by 94% (-9.4 \pm 15.7). Sociodemographic characteristics and BMI were unrelated to adherence.

Conclusion

Before surgery, MBS patients demonstrated high non-bouted MVPA adherence, but poor bouted MVPA/exercise, ST, and sleep adherence. Findings support increased clinical focus on: (1) all movement behaviors that patients perform during a 24-hour day; and (2) identification of modifiable targets to help promote greater adherence to 24-hour movement recommendations.

O-133

HYPERVITAMINOSIS B6 IN AUSTRALIA – FROM CLINICAL EXPERIENCE TO GOVERNMENT GUIDELINES: BARIATRIC CARE TEAM WERE A CRITICAL CATALYST FOR CHANGE

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Background

Fasting plasma pyridoxal 5'phosphate[PLP] concentrations accurately reflect B6 body stores¹. Daily B6 intake of 50 mg/day is associated with sensory²⁻⁴ and mild motor neuropathy⁵. Common non-dietary sources of B6 include supplements and energy drinks⁶.

Objectives

Encourage HCPs managing bariatric patients to be cautious with supplement recommendations and employ lifelong recall systems, given that B6 toxicity can/does occur.

Methods

Site 1 bariatric physician observed an increase in elevated B6 levels prompting self-directed audit. This was shared with Site 2, who independently performed an audit of PLP levels and agreed to collaborate, sharing their pooled findings with Therapeutic Goods Administration[TGA] as part of their inquiry into B6 and neurotoxicity.

Results

High and excessively high B6 defined as >190nmol/L and >250nmol/L respectively. Site 1 (AS), N=2953 results between 2015-2019, 37% and 24% respectively (Range: 20–7960 nmol/L). Site 2 (DWLS), N=612 results between 2021–2022, 28% and 18% respectively (Range: 34–5980 nmol/L). Identified that (i) Pyridoxine hydrochloride is the most used form, however more toxic⁷ than active phosphate form *and* (ii) many supplements had high doses of B6.

Conclusion

Regular screening and critical evaluation of B6 intake from all sources should be an integral part of the routine care.

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O-134
HYPOCALCEMIA IN THE IMMEDIATE POSTOPERATIVE PERIOD FOLLOWING METABOLIC BARIATRIC SURGERY – HYPE OR HARM?

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Introduction

Hypocalcemia following metabolic bariatric surgery (MBS) is a well-established medium- and long-term complication, particularly after malabsorptive procedures. However, there is a paucity of evidence on hypocalcemia after MBS in the immediate postoperative period.

Aim

Evaluate the prevalence of hypocalcemia on the 1st postoperative day after MBS and correlate it with potential associated factors.

Methods

We prospectively collected data over the course of 1.5 years on patients who underwent MBS in our service. The following parameters were examined: preoperative BMI, type of operation, preoperative serum calcium (Ca^{++}), preoperative albumin, preoperative adjusted ionized calcium (Payne formula), urine output in the first 24 postoperative hours, amount of bolus intravenous fluids (IVF), dose of bolus intravenous furosemide, postoperative calcium, postoperative albumin, postoperative adjusted ionized calcium, and postoperative creatine phosphokinase (CPK) levels. Continuous data are expressed as means \pm SD (range). Categorical data are presented as frequencies (%). Linear regression was implemented to designate potential correlations.

Results

The cohort included 105 patients (57% females). There were 96 primary procedures (77 LSG, 7 greater curvature plications, 1 SASI, 1 SADI-S, 8 OAGB, 2 diverted MGB), and 9 bariatric reoperations. The mean preoperative Ca^{++} was 9.4mg/dL \pm 0.3 (8.5–10), mean adjusted preoperative Ca^{++} was 10.1mg/dL \pm 0.4 (9.3–10.8), mean postoperative Ca^{++} was 7.7mg/dL \pm 0.6 (6.3–9.2), and mean adjusted postoperative Ca^{++} was 8.5mg/dL \pm 0.6 (7.1–10.0). Notably, 90 patients (85.7%) had postoperative Ca^{++} values $<$ 8.5mg/dL and 53 patients (50.4%) had adjusted Ca^{++} $<$ 8.5mg/dL. The mean difference between preoperative and postoperative Ca^{++} was 1.7mg/dL \pm 0.6 (0.3–2.9). The mean urine output in the first 24 hours was 9.0L \pm 3.9 (2.4–26.5), the mean bolus IVF was 3.8L \pm 2.6 (0–20), and the mean bolus furosemide was 1.5 ampules (20mg/2mL; range: 0–7). Postoperative Ca^{++} and adjusted postoperative Ca^{++} were weakly inversely correlated with first 24-h urine output ($r=-0.18$), bolus IVF ($r=-0.26$), and bolus furosemide ($r=-0.16$).

Conclusions

Immediate postoperative hypocalcemia is a real problem following MBS, given that in our series 85.7% of patients had postoperative Ca^{++} $<$ 8.5 and 50.4% had adjusted postoperative Ca^{++} $<$ 8.5 mg/dL. The correlation of hypocalcemia with urine output, IVF, and furosemide was weak, indicating other potential mechanisms.

O-135

IDENTIFICATION OF PATIENTS' NEEDS IN FOLLOW-UP CARE AFTER BARIATRIC SURGERY

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Background

Bariatric surgery is known to be the most effective treatment for patients suffering from obesity. In addition to weight loss, bariatric surgery improves obesity-associated comorbidities. Nevertheless, to maintain weight loss and treatment, a lifelong follow-up is recommended for patients. However, patients' attendance is low and non-attendance at follow-up care leads to poorer outcomes. Therefore, follow-up care after bariatric surgery needs improvement. We hypothesized that knowledge of the patients' needs is crucial for a successful bariatric follow-up care.

Objectives

The aim of this survey was to assess patients' needs in follow up care after bariatric surgery.

Methods

We evaluated patients' needs with the supportive care needs short form 34 (SCNS-SF34) and adapted the questionnaire specifically for patients after bariatric surgery. This tool measures five needs-based dimensions; informational and health system-related, physical and daily living, psychological, sexuality, patient care and support and health system and information. We contacted patients who underwent bariatric surgery in the University medical center Hamburg Eppendorf from 2018-2022 and attended at least once to follow up care. The questionnaire was completed online.

Results

238 patients gave consent to participate in the survey and 185 patients completed the questionnaire. Overall, we measured low scores of needs among our patients. With an average of 27 out of 100 points informational and health system-related needs appears to be the most important among the categories physical and daily living, psychological, sexuality, patient care and support and health system and information. Especially access to further support seems to be important in bariatric follow up care.

Conclusion

Patients in bariatric follow up care seem to have informational und health system related needs. The needs within the categories measured with the SCNS-SF34 tends to be lower than anticipated. Since there is no validated tool to assess patients' needs in bariatric follow up care, more research is needed.

O-136

IMPACT OF BARIATRIC SURGERY ON DEPRESSION AND BODY IMAGE: SHORT-TERM RESULTS

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Aim

Evaluate the prevalence and the trend of depression and body image disturbances in a cohort of obese patients, before and six months after laparoscopic sleeve gastrectomy. Furthermore, the existence of a link between patients' characteristics and the prevalence and trend of depression and body image disturbances was investigated.

Methods

Patients scheduled for a laparoscopic sleeve gastrectomy at our Center were asked to answer two self-administered psychometric questionnaires: Beck Depression Inventory 2 (BDI-II) and Body Uneasiness Test A (BUT-A), before and six months after surgery. Potential correlations between patients' characteristics and depression were tested using Spearman and Mann-Whitney Test, respectively for parametric and non-parametric variables, and a linear regression model.

Results

Thirty patients were included in the study. The prevalence of depression and body image disturbances decreases six months after surgery, respectively 33,3% vs 6,7% and 73,3% vs 30,0%. Higher mean scores before surgery are associated with higher mean scores after surgery, irrespective of overall increasing/decreasing in individual scores (BDI-II $p=0,001$ – BUT-A $p=0,021$). Preoperative steatosis ($p=0,028$) and anxiety ($p=0,005$) negatively affect preoperative BDI-II mean score; preoperative chronic gastritis ($p=0,047$), instead, positively affects post-operative BDI-II mean score. Finally, a history of prior major surgery ($p=0,005$) negatively affects post-operative BUT-A.

Conclusion

Depression and body image disturbances significantly improve after laparoscopic sleeve gastrectomy, especially in patients affected by preoperative chronic gastritis.

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IMPACT OF BARIATRIC SURGERY ON RHEUMATIC DISEASES

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Background

Obesity is a chronic disease and condition that seems to affect the inflammatory pathway activation and seems to be one of the major risk factors of inflammatory diseases like rheumatic diseases (RD). Bariatric surgery is the most effective known treatment for obesity, which is increasing worldwide.

Objectives

In this review, we aim to assess the impact of bariatric surgery and the subsequent weight loss and adipose tissue loss on the outcome of rheumatic diseases.

Methods

This review of literatures was conducted to assess the impact of weight loss following bariatric surgery on certain rheumatic diseases like rheumatoid arthritis, gout, and osteoarthritis. In this study, we searched the main databases: PUBMED, EMBASE, SCOPUS, and ISI.

Results

Current published studies showed that in general, weight loss following bariatric surgery decreased inflammatory markers in the serum, but some studies showed that in patients with gout, there was no remarkable change in gout attack frequency. Also in patients with RA, it was reported that reductions in morbidity, mortality, and disease activity were seen. It is noticeable that weight reduction due to bariatric surgery has a significant effect on the severity of knee osteoarthritis.

Conclusion

It appears that weight loss following bariatric surgery has a great effect on some rheumatic diseases through the reduction of inflammatory markers in the serum, which results in a better prognosis and control of some rheumatic diseases.

O-138
IMPACT OF NISSEN SLEEVE GASTRECTOMY ON THE INCIDENCE AND REMISSION OF BARRETT OESOPHAGUS IN THE LONG TERM

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Introduction

Sleeve gastrectomy is the most commonly performed bariatric operation globally. The main complication is GERD (prevalence of 15-40%) and de novo GERD. In the medium term, this GERD can increase the incidence of Barrett's esophagus (BE), which is a risk factor for esophageal adenocarcinoma. BE is present in 5% of patients with obesity. Following conventional sleeve gastrectomy, BE is noted in up to 16% of patients postoperatively. Recently, Nissen sleeve gastrectomy (NSG) has been shown to reduce the frequency of postoperative GERD compared to conventional sleeve gastrectomy. This study aims to evaluate the impact of NSG on the incidence and remission of BE in the long term.

Material and Method

This bicentric retrospective study included 692 patients who received NSG from September 2013 to July 2021. All patients underwent preoperative upper GI endoscopy and were then scheduled to receive upper GI endoscopy between 1 and 2 years and then between 3 and 5 years postoperatively. BE was systematically confirmed by biopsies.

Results

74 patients had endoscopic suspicion of BE, which was confirmed on 54/692 patients by histology (7.8% of the initial cohort). The BE lesions consisted of 18.5% (n=10) intestinal metaplasia and 75.9% (n=41) fundal metaplasia. Among these 54 patients, 38 underwent endoscopic investigation within 2 years postoperatively. The biopsies showed healed BE in 25/38 patients (64.1%). Despite a high rate of loss-to-follow-up at 5 years, of the 7 patients who had their follow-up endoscopy, 2 patients had proven BE. Among these 2 patients, we report a case of esophageal adenocarcinoma developed on BE with intestinal metaplasia 6.5 years after NSG in a patient whose valve was no longer functional. Concerning the incidence of BE post NSG: of the 638 patients operated on without EBO lesion on the preoperation, 234 performed the follow-up endoscopy within two years (37%). The incidence of de novo BE between 1 and 2 years is nil, as between 3 and 5 years.

Conclusion

The NSG is associated with healing of known BE in approximately two-thirds of patients at 2 year follow-up. This is consistent with the GERD improvement that has been shown with NSG.

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IMPACT OF PREOPERATIVE OBESITY MEDICATION USE ON BARIATRIC SURGERY OUTCOMES

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Background

Bariatric surgery outcomes are well described, with average total weight loss at 24 months postoperatively ranging between 20-30% for sleeve gastrectomy and gastric bypass procedures. Recently, an increasing number of patients undergoing bariatric surgery have been taking obesity medications, such as GLP-1 analogues, perioperatively. The impact of preoperative obesity medication use on postoperative weight loss is unknown.

Aims

To investigate the effect of preoperative obesity medication use on post-bariatric surgery weight loss outcomes.

Methods

A retrospective review of patients who underwent bariatric surgery in a high-volume bariatric surgery unit from Jan 2021 to Sept 2022, and who had been prescribed obesity medications preoperatively, was undertaken. Body weight prior to taking medication, pre surgery and at 6 & 12 months postoperatively was analysed.

Results

197 patients underwent primary laparoscopic bariatric procedures over a 21-month period (69% gastric bypass, 31% sleeve gastrectomy, 77% female). Mean age (SD) was 47.0 (11.6) years. Prior to surgery, 30.5% (n=60) of patients were prescribed obesity medications. GLP-1 analogues were most frequently prescribed (Liraglutide n=8, Semaglutide n=49, Mysimba n=3). Of the 57 patients taking GLP-1 analogues, 21 (37%) had a concurrent diagnosis of type 2 diabetes. Among patients taking these medications preoperatively, mean (SD) weight loss prior to surgery was 9.8 (13.8)%. Weight loss postoperatively (from day of surgery) in the patients taking obesity medications was 10.4 (3.2)% at 6 weeks, 14.9 (4.0)% at 3 months, 21.8 (5.4)% at 6 months and 24.2 (8.4)% at 12 months. There was no significant difference in weight loss at any time-point postoperatively according to the type of medication taken preoperatively, or the bariatric procedure performed.

Conclusion

Patients taking obesity medications prior to bariatric surgery continue to lose weight postoperatively at the expected rate, even after responding well to these medications preoperatively.

O-140
IMPACT OF RACE ON PATIENT OUTCOMES AND ACCESS TO BARIATRIC SURGERY IN THE UNITED KINGDOM: A NATIONAL BARIATRIC SURGERY REGISTER ANALYSIS

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Background

Bariatric surgery is an effective obesity treatment, reducing obesity-related diseases and cancer risk. Obesity is more prevalent among ethnic minorities, and racial disparities affect access to healthcare services, including bariatric surgery. Ethnic minorities may experience less weight loss, reduced comorbidity resolution, and more severe post-operative complications. This study explores the impact of race on patient outcomes among various ethnic groups following bariatric surgery in the UK by analyzing National Bariatric Surgery Register (NBSR) data.

Methods

The NBSR database, overseen by the British Obesity & Metabolic Surgery Society, was examined, including adult patients with an ethnicity code. Variables such as demographics, weight, BMI, comorbidities, procedures, complications, and mortality were analyzed. Statistical analyses were performed using SPSS IBM version 28.

Results

A total of 77,710 patients with an ethnicity code were identified. The median age was 56 (IQR 37-55 years) and 78.8% of the total population were female. Ethnic minorities had higher BMI, higher ASA scores, and more existing medical comorbidities at the time of operation compared with Caucasian patients. Afro-Caribbean patients in particular had the highest BMI (44.5 Kg/m², p<0.001), rate of hypertension (43.2%) and diabetes mellitus (29.1%). Multivariable logistic regression models adjusting for age, ASA, BMI and type of bariatric operation demonstrated that ethnic minorities suffered higher complication rates compared with their Caucasian counterparts; Afro-Caribbean (OR 1.47, 95% CI 1.22-1.87, p<0.001), African (OR 1.34, 95% CI 1.05-1.70, p=0.019).

Conclusions

Significant differences in BMI, morbidity, and outcomes exist across ethnic groups in bariatric surgery. Ethnic minorities have higher BMI, greater comorbidities, and higher complication rates. Racial disparities may restrict access to bariatric surgery in the UK. Future studies should evaluate barriers restricting ethnic minority patients' access to bariatric surgery and examine the severity of obesity-related comorbidities among ethnic minorities and their effect on post-operative outcomes.

O-141

IMPAIRED SENSITIVITY TO THYROID HORMONES IS ASSOCIATED WITH ELEVATED SERUM URIC ACID IN FEMALE PATIENTS WITH OBESITY AND IS IMPROVED AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY

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Background

Obesity is a modifiable risk factor for hyperuricemia. Meanwhile, obese patients may have mild acquired resistance to thyroid hormones. There is a delicate interplay between thyroid hormones and thyrotropin (TSH) and obesity. However, the association between thyroid hormone sensitivity and hyperuricemia has not been elucidated in obese patients pre- and post- laparoscopic sleeve gastrectomy.

Objectives

We aimed to investigate the relationship between impaired thyroid hormone sensitivity and elevated UA level in obese euthyroid patients pre and post-LSG.

Methods

This retrospective study enrolled 1297 (559 males, 738 females) obese euthyroid patients, 248 of whom underwent subsequent laparoscopic sleeve gastrectomy (LSG) surgery.

Uric acid, thyroid hormones and anthropometric data were measured pre- and 3 months post-LSG. The thyroid hormone sensitivity indices were calculated based on FT4 and TSH, including the thyroid feedback quantile index (TFQI), thyrotropin resistance index (TT4RI) and TSH index (TSHI).

Results

Obese females with impaired sensitivity to thyroid hormones had higher UA levels (males P for trend >0.05, females P for trend < 0.01). After adjusting for age, BMI, SBP, DBP, HbA1c, TC, TG, HDL, LDL, Cr, BUN, ALT, AST and PRL, the odds ratio of the fourth versus the first quartile of TFQI was 3.872 [confidence interval, CI: 1.166–12.853], TSHI was 3.246 [CI: 1.091–9.658], TT4RI was 2.622 [CI: 0.885–7.772], showing strong associations with hyperuricemia in obese females (all P < 0.05). TFQI, TSHI and TT4RI all patients decreased significantly after LSG, but there was a positive correlation with the decrease of uric acid level only in females.

Conclusion

Higher values in resistance to thyroid hormone indices are associated with hyperuricemia in obese females. LSG significantly improved the central resistance of thyroid hormone. The alleviation of thyroid hormone resistance post-LSG might be partially explained by the decrease of UA level after surgery.

O-142
IMPROVEMENT OF HYPOTHYROIDISM AFTER BARIATRIC SURGERY – IS IT HYPO TO BEGIN WITH? LESSONS LEARNT FROM BARIATRIC SURGERY

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Background

Thyroid hormone plays a vital role in the management of energy expenditure and body mass index (BMI). Hypothyroidism is associated with a decreased metabolic rate and increased prevalence of obesity. Many obese patients present with high TSH levels, but normal FT3, FT4 levels.

Objectives

We aimed to analyse the improvement of hypothyroidism (TSH, FT3, FT4) in patients undergoing bariatric surgery.

Methods

We performed a retrospective study from prospectively collected database from our tertiary care centre. A data of post bariatric patients, who completed 1 year follow-up from February 2018 to January 2021, were divided as control and test groups. Control group comprised of 120 euthyroid patients with obesity while test group comprised of 240 hypothyroid patients with obesity. Data was collected using inpatient and outpatient records and the same analysed using SPSS software.

Results

Out of 240 patients, 69(28.6%) were males and 171(71.4%) were females. Mean pre op BMI of control group and test group were 46.32 ± 8.26 and 45.08 ± 9.70 respectively. %Excess BMI loss (EBMIL) at 1 year of control and test group was 79.66 ± 14.12 and 80.43 ± 12.59 respectively. In test group, pre op serum TSH levels improved significantly ($p=0.045$) after 6 months, but no significant improvement found after 1 year ($p=0.252$). Free T3 and free T4 did not improve significantly after 6 months and 1 year post surgery. We found significant ($p=0.012$) reduction of oral levothyroxine dosage from pre op to 1 year post surgery.

Conclusion

Bariatric surgery can improve the thyroid function. However the question remains whether the elevated TSH levels and subsequent improvement is actual hypothyroidism as a response to thyroxine resistance. With levels improving with weight loss and no impact on the weight loss irrespective of the TSH level, we believe elevated TSH need not be considered as hypothyroidism unless lower FT3 or FT4 levels are noted.

O-143

IMPROVING EQUITY OF ACCESS TO A PUBLICLY FUNDED BARIATRIC SURGERY PROGRAMME BY REMOVAL OF MANDATORY WEIGHT LOSS TARGETS

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Background

Many public bariatric surgery programmes require preoperative weight loss to be demonstrated, and in fact, many set mandatory preoperative weight loss targets. A recent systematic review has suggested however, that there is little evidence to support or refute this in terms of weight loss outcomes or complications. In 2017, Auckland City Hospital eliminated preoperative weight loss targets from the bariatric programme, to attempt to improve access to bariatric surgery, particularly for Māori and Pacific populations. These groups face inequitably high rates of obesity, with 50.8% of Māori and 71.3% of Pacific adults being affected, compared to 31.9% of European/Other adults.

Objectives

This study aims to determine the effect of removing mandatory weight loss targets on weight loss outcomes and access to bariatric surgery, particularly for Māori and Pacific populations.

Methods

A retrospective analysis of 400 patients who underwent bariatric surgery at Auckland City Hospital between 2015 and 2021 was performed. Half of these patients were given a preoperative weight loss target. Patients were followed up for one year following surgery.

Results

Whilst preoperative weight loss was greater when preoperative weight loss targets were given, the overall total body weight lost was similar between the groups (40.8kg and 43kg on average). At 12 months follow up, the average percentage of excess body weight lost was 67.9% for those who were given weight loss targets, compared to 67.4% for those who were not. With the utilisation of weight loss targets, 20% of patients who underwent bariatric surgery were Pacific and 21% were Māori. However, when weight loss targets were removed, 37.7% of patients were Pacific and 15.7% were Māori.

Conclusion

Removing mandatory preoperative weight loss targets did not adversely affect weight loss outcomes. Furthermore, the proportion of Pacific patients accessing bariatric surgery nearly doubled when weight loss targets were eliminated, thus suggesting improved equity of access to the bariatric surgery programme, for a population inequitably affected by obesity.

O-144
IN THE GLP-1 AGONISTS ERA, FACTORS ASSOCIATED WITH >30% TOTAL BODY WEIGHT LOSS AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY

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Background

Recently, total body weight loss (TBWL) with GLP-1 agonists is often reported as nearly equal to TBWL after laparoscopic sleeve gastrectomy (LSG). The best-reported TBWL with Semaglutide is 15.8% over 68 weeks. There is a need to demonstrate that TBWL with GLP-1 and LSG is not comparable.

Objective

We aimed to assess if LSG can achieve >30% TBWL and evaluate the factors that predict >30%TBWL after LSG.

Methods

Data from 412 patients who underwent LSG between March 2016 and January 2022 were prospectively collected. All the patients participated in an individualized preoperative weight loss program with a goal of 10% TBWL. This program included weight-based daily protein intake from protein supplements and food, activity/sleep schedule-based meal times, and an aerobic exercise goal of 2,000-calorie burn/week, customized to the patient's preferences, physical abilities, and comorbidities. Demographics and weight parameters were collected at baseline and up to 5 years postoperatively.

Results

The mean age was 43.4 ± 11.0 years and the mean BMI was 42.0 ± 4.0 kg/m². 13.1% (54/412) were males and $10.9 \pm 3.7\%$ was the mean preoperative TBWL. 58.4% (118/202), 41.5% (56/135), 21.1% (12/57), and 8.7% (2/23) patients attained $\geq 30\%$ TBWL at 1-year, 2-year, 3-year, and 4-year postoperatively, respectively. The mean postoperative TBWL was 32% at 1 year, 27.9% at 2 years, 22% at 3 years, 20% at 4 years, and 16% at 5 years. On regression analysis, male gender ($p=0.02$), preoperative TBWL ($p=0.01$), and initial BMI ($p=0.04$) had an independent significant effect on the postoperative %TBWL.

Conclusion

A 30% TBWL is feasible in a significant number of LSG patients which separates it from TBWL after GLP-1 agonist usage. Preoperative TBWL plays a strong role in increasing the likelihood of a 30% TBWL one year after LSG. Future efforts should focus on implementing preoperative weight loss nationwide and strategies to improve long-term follow-up and weight loss maintenance.

O-145

INCIDENCE AND PREDICTIVE FACTORS ASSOCIATED WITH SIGNIFICANT LOSS OF BONE MINERAL DENSITY AFTER BARIATRIC SURGERY: A RETROSPECTIVE COHORT STUDY IN THAILAND

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Background

Loss of bone mineral density (BMD) following bariatric surgery is an important issue. However, only a few studies have investigated the effect of bariatric surgery on BMD, particularly among Asian populations.

Objective

We aimed to investigate the incidence and predictive factors of significant BMD loss after bariatric surgery in the Thai population.

Materials and Methods

The medical records from February 2012 to March 2021 were reviewed in the bariatric patients who had BMD measurements pre-and post-operatively. Surface BMD was measured by dual x-ray absorptiometry (DEXA). A significant reduction was defined as >0.015 g/cm² at lumbar and >0.03 g/cm² in the total body and femoral region. Univariate and multivariate analyses were conducted to identify predictive factors.

Results

A total of 174 and 87 patients who had BMD measurements in postoperative 1st and 2nd years, respectively were included. The incidence of significant BMD loss increased over time (At 1st and 2nd years: 64% and 76% for the total body, 54% and 73% for femoral neck, 39% and 60% for lumbar). The Age-matched average Z-score indicated significant BMD loss in the total body and femoral neck, but not in lumbar. However, the patients with osteopenia were 6% at 2nd year and only one case of osteoporosis was observed during the study period. Multivariate analysis revealed that BMD loss in 2nd year was associated with weight loss [OR 1.05(1.01,1.09), p=0.014] for total body, age [OR 1.07(1.01,1.12), p=0.01] for femoral neck, and age [OR 1.09(1.04,1.15), p<0.001] and % loss of fat mass [OR 1.07(1.02,1.11), p<0.001] for lumbar.

Conclusions

The incidence of significant BMD loss increased over time postoperatively. However, the incidence of osteopenia and osteoporosis in this study was low. Weight loss, age, and % loss of fat mass were predictive factors for significant BMD loss following bariatric surgery. Therefore, nutrition supplements and long-term follow-up by DEXA should be considered, especially in high-risk patients.

Keywords: Obesity, Bariatric surgery, Bone mineral density, Osteoporosis, Asian population.

O-146

INCIDENTALOMAS IN BARIATRIC SURGERY

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Background

Obesity has become a rapidly growing global epidemic in recent decades, a fact that has occurred in parallel to the development of bariatric surgery. Along with this, the relationship between obesity and the development of various tumours and premalignant conditions is well known. It is important to carry out a correct preoperative study to detect possible gastric lesions, as well as a thorough intraoperative inspection and correct resection of the surgical specimens.

Objetives

Our aim was to detect the incidence of gastric tumours in patients undergoing bariatric surgery by analysing the preoperative histological findings and those of the surgical specimens.

Methods

Retrospective review of 1268 bariatric interventions performed in our centre between November 2012 and December 2022 in a total of 1183 patients. Preoperative histological findings were analysed, as well as a total of 320 surgical specimens obtained during the intervention.

Results

Eight gastric tumours (0.67%) were diagnosed: six GIST, one carcinoid tumour and one ectopic pancreas. Among them all, none were detected in the preoperative histological study (performed in 97.5% of patients) but were detected intraoperatively or in the anatomopathological study of the surgical specimen. There were no differences in the clinical and demographic characteristics of the patients and in all cases the resections showed disease-free margins. None of the patients required adjuvant therapies to surgery.

Conclusion

Obesity poses an increased risk for the development of malignant, benign and premalignant conditions. It is difficult to detect the real incidence of oesophagogastric neoplasms in patients undergoing bariatric surgery, although fortunately the incidence in different series is low (<1%). In our series, where practically all the operations were performed laparoscopically, the incidence of gastric tumours was very low (0.67%), all of the incidentalomas that were detected intraoperatively or after study of the specimen, which means that inspection of the gastric surface in this type of surgery is essential for this type of finding.

O-147

INITIAL EXPERIENCE OF BARIATRIC AND METABOLIC CENTERS AGED UNDER 35 - A MULTICENTRIC STUDY

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Introduction

Obesity is rising globally at alarming rates as a pandemic itself. Bariatric Surgery (BS) has proven to be the most effective therapy for sustained weight loss and comorbidities resolution. Surgical Bariatric Training and Skills Acquisition have been controversial. Preceptorship and proctorship of bariatric procedures are featured in High Volume Centers (HVC) along competency-based medical education, known as fellowship programs, to improve young physicians' skills and criteria. The impact of this academic medical training appears to improve outcomes in Bariatric and Metabolic Centers (BMC) holding these fellowship accreditations.

Objective

To demonstrate the non-inferiority of perioperative outcomes and mid-term results of accredited BMC aged Under 35 (U35) compared to current published data.

Methods

From September 2017 to September 2019, patients who underwent primary BS in six different Argentinian BMC U35 were enrolled with a minimum follow-up of 24 months. Every surgical team was composed entirely by surgeons aged 35 or less. Revisional Surgery was excluded. Age, gender, operative time, complication rate, hospital stay, comorbidities remission, BMI and %EWL were evaluated at 0, 1, 3, 6, 12 and 24 months.

Results

Six participating BMC U35 recruited 308 patients who meet the inclusion criteria. 197 (63.9%) were women. There were 157 cases of gastric bypass (GB) (50.9%) and 151 of sleeve gastrectomy (SG) (49.1%). Mean age was 42.5±13.3 years old. Average Initial pre-operative BMI was 47.3±8.4 Kg/m². Operative time was 68.4±9.4 and 130.3±18.2 minutes for SG and GB, respectively. Hospital stay was 1.7±1.3 days. Mean evolution of BMI was 45.2±5.3, 40.7±4.8, 36.3±3.5, 34.6±2.6, 29.4±1.3, 28.6±3.1 at 0, 1, 3, 6, 12 and 24 months from surgery, respectively. Complications were reported in eight cases (2.59%) and four (1.29%) required reintervention. Two SG leak, one because of staple line bleeding in SG and another secondary to unseen Small Bowel perforation during GB. No re-admission nor mortality was registered.

Conclusions

Primary BS in accredited BMC U35 is safe and feasible. Perioperative outcomes and mid-term results revealed non-inferiority when assessed. Operative time was slightly longer than other studies which might be due to learning curve. Further studies with longer follow-up are needed to confirm this preliminary report.

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INTRA-THORACIC GASTRIC POUCH MIGRATION FOLLOWING LAPAROSCOPIC SLEEVE GASTRECTOMY & ITS IMPACT ON THE GASTRIC SLEEVE OUTCOME

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Background

Intra-thoracic sleeve migration (ITSM) is an underreported complication, its occurrence is incriminated in the suffering from many symptoms like epigastric pain, persistent vomiting, and Gastroesophageal reflux disease with subsequent affection of the quality of life of the bariatric patient.

Aim

To determine the incidence of ITSM, evaluate its impact on the patient & management efficacy. **Methods:** Patients underwent laparoscopic sleeve gastrectomy (LSG) in our hospital between January and October 2018 were included in this prospective study and were screened for ITSM up to Three years, Symptomatic patients who failed to respond to medical treatment underwent assessment through esophagogastroduodenoscopy. Confirmed ITSM patients were offered Roux en-Y gastric bypass (RYGB) plus cruroplasty. Quality of life was assessed before and after reoperation using GERD-HRQL questionnaire.

Results

Three hundred and forty-six LSG were performed in our hospital by the same technique, drop-out rate was (13.29%), Incidence of ITSM was found to be 16%, the most common presentation of ITSM was persistent vomiting (66.7%) followed by refractory GERD (58.3%). Regarding management (45.83%) cases agreed to undergo Surgical revision to RYGB plus cruroplasty. Mean GERD-HRQL score improved after Re-operation from 47.13 to 29.19 (P-value <0.001)

Conclusion

ITSM should be considered in LSG patients presenting with vomiting and/or GERD. Pre- and post-LSG endoscopic assessment is recommended, CT gastroscopy has shown a high diagnostic value for detection of ITSM. RYGB plus cruroplasty is a valid option if not the best for repair of ITSM even after successful weight-loss LSG.

Keywords: Sleeve gastrectomy, Roux en-Y gastric bypass, Obesity surgery, Bariatric surgery, Gastroesophageal reflux disease, Sleeve migration.

O-149

INVESTIGATING THE PREVALENCE OF NUTRITIONAL ABNORMALITIES IN PATIENTS PRE AND POST BARIATRIC SURGERY – AN AUSTRALIAN EXPERIENCE

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Background

Bariatric surgery remains an effective treatment for the condition of obesity, however it predisposes patients to nutritional deficiencies and related complications. Aims: Objectives: The aim of this study was to identify nutritional abnormalities, weight loss, adherence to supplements, and presence of gastrointestinal symptoms in a cohort of bariatric surgical patients.

Methods

An analysis of the electronic medical records of patients attending a multidisciplinary private clinic in Sydney, Australia from August 2020 to August 2021 was conducted. Data on anthropometric measures, nutritional indices, adherence to supplements and gastrointestinal symptoms preoperatively and then at ≤ 6 months, 1 and 2 years or more postoperatively were collected.

Results

A total of 231 patients were included in the study. The majority of patients were female (76.2%), with a sleeve gastrectomy (78.8%). Average preoperative BMI was 43.4 ± 7.1 kg/m². Weight loss ≥ 2 years post-surgery was 33.5 ± 12.4 kg. The most common nutritional abnormalities pre-operatively were: C-reactive protein (47.7%), vitamin D (39%), B₁₂ (31%), parathyroid hormone (27.6%), and ferritin (12.7%). Vitamin B₁₂ (23.2%), parathyroid hormone (23%), vitamin D (17.7%) and ferritin (15.9%) remained common abnormalities postoperatively. Adherence to multivitamins was 90% in the first year following surgery, declining to 77% at ≥ 2 years. Gastrointestinal symptoms were predominantly present in the initial stages following surgery, manifesting thiamine deficiency in 6.5% of patients.

Conclusion

Despite achieving durable weight loss, nutritional abnormalities remain an ongoing challenge for bariatric surgery. Adherence to nutrient supplements, gastrointestinal symptoms and related complications are important considerations in addressing the problem.

O-150

IS HIIT MORE EFFECTIVE THAN MICT FOR BODY COMPOSITION, FUNCTIONAL CAPACITY AND QUALITY OF LIFE AFTER BARIATRIC SURGERY?

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Background

Exercise has been highly recommended after bariatric-metabolic surgery. However, there is still no consensus on which training modality is the most appropriate and effective for this population.

Objective

To compare the effects of moderate-intensity continuous training (MICT) and highintensity interval training (HITT) on body composition, functional capacity, and quality of life in patients who underwent bariatric-metabolic surgery.

Methods

This is a preliminary result of a randomized controlled trial (NCT04235842). Eight participants were randomized into a control (i.e. no supervised intervention), MICT (60% of heart rate reserve) or HIIT (90% of maximal heart rate) groups. Body composition using a tetrapolar bioelectrical impedance, functional capacity through the 6-minute walk test (6MWT), handgrip strength, peak expiratory flow, chair stand test, and the perception of quality of life using the Moorehead-Ardelt questionnaire were assessed at 4 timepoints: pre-surgery, 21 days after surgery, 8- and 16-weeks post-training. Descriptive statistics were applied to describe the preliminary results.

Results

The HIIT group had a greater percentage loss of total fat mass (↓46.4%) at the end of the protocol (16 weeks post-training) compared to the MICT group (↓25.6%). The exercised groups improved functional capacity more than the control group (chair stand test: MICT ↑26.6% vs HIIT ↑46.87 vs CG ↑10%; 6MWT: MICT ↑5.47% vs HIIT ↑12.97% vs CG ↓0,1%; and handgrip strength: MICT ↓4,98% vs HIIT ↓3,50% vs CG ↓6.30%). The same was observed for the perception of quality of life (HIIT: 242.85% vs MICT: 114.28% vs CG: 21,62%), with the HIIT group presenting the greatest increase.

Conclusion

The preliminary results showed that HIIT may be the most effective strategy for improving body composition, functional capacity and perceived quality of life after bariatric-metabolic surgery. In addition, both MICT and HIIT seem to be better than no supervised intervention.

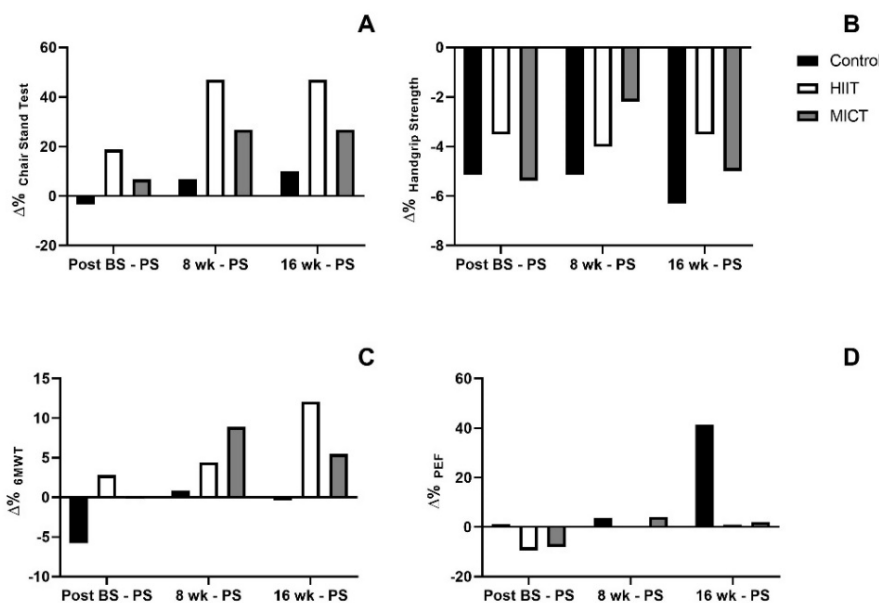


Figure 1. Percentage changes from pre-surgery (PS). BS: bariatric-metabolic surgery.

O-151

IS IT WISE TO ADVOCATE BARIATRIC SURGERY FOR PATIENTS WITH END STAGE LIVER DISEASE AND SEVERE OBESITY?

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Background

Severe obesity is an epidemic plague worldwide strongly associated with non-alcoholic fatty liver disease (NAFLD), being now the most common cause of chronic liver disease. Some patients with NAFLD may progress to steatohepatitis (NASH) and eventually to liver cirrhosis. NASH is deemed to become the leading indication for liver transplantation, taking over other commonest indications of the past, namely chronic hepatitis virus infection.

Methods and Results

In the last 5 years, 3 patients with cirrhosis were offered laparoscopic sleeve gastrectomy (LSG). The mean age at surgery was $60,2 \pm 8.5$ ys, two of them (66,6%) were male. The preoperative mean BMI was 48.1 kg/m^2 (range 40-61,7). Baseline MELD score was 7, 14 and 14, respectively. One patient had LSG + liver resection (S6) + Rt nephrectomy, another one LSG + MW ablation S2-S3. Both these patients died on POD 60 and POD 90, respectively, due to sepsis and hepatic failure. One had early staple line leak (POD 2), while the other developed leak 30 days after operation. The post-operative course was uneventful in only one patient and is still on follow.-up (3 ys) with a %EWL of 52.5%.

Conclusions

Bariatric surgery may be offered to carefully selected patients with compensated cirrhosis with the aim to down-staging/delisting or bridging to OLTx. These patients need to be carefully and properly assessed as morbidity and mortality appear to significant. In particular, Patients with MELD score > 12 must be assessed for portal gradients and counseled for high operative risk.

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IS REVISIONAL BARIATRIC SURGERY EFFECTIVE AND SAFE?

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Introduction

Revisional bariatric surgery (RBS) represents 7 – 15% of total bariatric surgery and is increasingly common. The aim of this study was to evaluate efficacy and safety of RBS on patients with failure of weight loss after bariatric surgery without gastro oesophageal reflux.

Materials and Methods

We performed a retrospective multicentric study on patients with RBS for inadequate weight loss and weight regain. We compared percentage of excess weight loss (%EWL) at 1, 6, 12 and 18 months after surgery and postoperative complications.

Results

We included 144 patients. The first surgery was mostly sleeve gastrectomy (SG) (74.3%, n=107) then Roux-en-Y gastric bypass (RYGB) (19.4%, n=28) and one anastomosis gastric bypass (OAGB) (6.25%, n=9). The %EWL at 18 months was 43.0±50.6%. The RBS was mostly RYGB (61.1%, n=88), then resizing the gastric pouch (13.9%, n=20), OAGB (12.5%, n=18), SG (9.7%, n=14) and SADI (single anastomosis duodeno-ileal bypass with SG) (2.7%, n=4). The %EWL at 18 months was 50.2 ± 29.4%. There isn't significant difference in %EWL according to the technique performed during the RBS (p=0.45). The revisional surgery %EWL at 18 months was higher than during the first surgery (p<0.01). During the first surgery, early complications occurred on 4.2% (n=6) patients and late complications on 5.5% (n=8). During the RBS, early complications occurred on 13.8% (n=20) patients and late complications on 20.1% (n=29). The complications rate during the RBS seemed higher than during the first surgery but the difference wasn't significant for early (p=0.46) and late complications (p=0.20). Univariable logistic regression demonstrated high age (OR 1.06, IC95% [1.01-1.11], p=0.03), high first surgery BMI (OR 1.14, IC 95% [1.04-1.24], p<0.01), low first surgery %EWL at 18 months (OR 0.97, IC 95% [0.95-0.99], p<0.01) are associated with more failure %EWL.

Conclusion

This study confirms that RBS is an efficient and safety surgery to treat failure in %EWL and weight regain after a first bariatric surgery. High age, high first surgery BMI and low first surgery %EWL at 18 months seem to be predictive of failure in %EWL after the second procedure.

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LAPAROSCOPIC BARIATRIC SURGERY AFTER ENDOSCOPIC SLEEVE GASTROPLASTY: IS IT MORE DIFFICULT?

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Background

Obesity is a significant problem worldwide, currently on the rise. Increasingly, less invasive procedures than bariatric surgery are available as treatment. In recent years, endoscopic sleeve gastroplasty (ESG) is spreading as an alternative solution for those patients who are unwilling or not eligible to undergo surgery. However, it may lead to insufficient weight loss or weight regain within few years; in this case, a surgical revision may be considered.

Objectives

Analysis of short-term outcomes in our experience of laparoscopic bariatric surgery after ESG.

Methods

In our center we applied a combined approach, performing an intraoperative esophagogastroduodenoscopy to correctly identify and accurately remove ESG sutures in order to safely perform the surgical revision. Previous studies describe esophagogastroduodenoscopy before and not during surgery. This single-stage technique avoids complications such as possible strictures caused by sutures retained within the gastric wall or interposed in the stapler line causing a misfire. The simultaneous laparoscopic abdominal exploration allows us to mark any suture that cannot be endoscopically removed, preventing suture line overlapping. We then performed laparoscopic sleeve gastrectomy (SG) or gastric bypass (RYGB) according to each patient's surgical indication.

Results

Our case series included five patients (3 female, 2 male, mean age 45 years), with mean body mass index (BMI) at the time of primary ESG of 39.5. In all patients weight regain occurred after achievement of a Nadir % excess weight loss (%EWL) of 63.3. At the time of the revision mean BMI was 39.6. We performed four SG and one RYGB. Four surgeries ended without complications, nor lengthening of the hospital stay and after six months resulted in a %EWL of 76.1. One of four patients who underwent SG manifested an early gastric fistula, currently under conservative treatment with enteral nutrition.

Conclusion

Based on our experience, laparoscopic revision in patients who have not benefited from ESG could represent a successful option, provided that intraoperative endoscopy is always performed. Since ESG has a higher rate of weight regain, surgery should remain the first choice in eligible patients; moreover, despite our low statistical significance, revision surgery after ESG may carry an higher complication rate.

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LAPAROSCOPIC BARIATRIC SURGERY IMPLEMENTATION: A DEVELOPING COUNTRY PERSPECTIVE

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Background

Bariatric Surgery is a procedure used to promote weight loss and better control of comorbidities. Its Laparoscopic technique requires specific professional and hospital qualifications, which may be particularly challenging in Developing Countries.

Objectives

This Project aims to evaluate if Laparoscopic Bariatric Surgery is a feasible alternative in Developing Countries, given the budget and technical limitations of these countries' health systems.

Methods

We analyze over 110 thousand surgeries performed from 2004 to 2022 in 100 Brazilian Health Facilities. We use a Difference-in-Differences with multiple treatment periods approach (Staggered Diff-in-Diff) to identify the effects caused by the creation of a Federal Law in 2017 which allowed surgeons to perform Laparoscopic Bariatric Surgeries in the Brazilian Public Health System. We evaluate changes in multiple dependent variables, such as length of stay, length of stay in ICU, surgeries costs, and the number of surgeries. As our treated units, we adopt hospitals that performed at least one laparoscopic procedure after the promulgation of the Law. Our counterparts are hospitals that have never performed laparoscopic bariatric surgeries.

Results

Our results suggest that hospitals that performed laparoscopic bariatric surgeries increased their patients' length of stay in the ICU by 0.19 days ($p=0.032$). In these hospitals, the mean cost of bariatric procedures increased by US\$ 85.44 ($p=0.009$), but the total length of stay and the number of surgeries performed presented no statistically significant changes.

Conclusion

Implementing Laparoscopic Bariatric Surgery in a Public Health context in developing countries faces several challenges. Our study presents evidence that solely creating a specific Law is not enough to bring the advantages of the performance of Laparoscopic Procedures.

Table 1. Average Treatment on the Treated – Staggered Diff-in-Diff.

	Simple		
	ATT	SE	p-value
Length of stay (days)	-0.11	0.38	0.767
Length of stay - ICU (days)	0.19**	0.09	0.032
Number of surgeries	8.49	10.03	0.398
Costs (US\$)	85.44***	33.05	0.009

O-155

LAPAROSCOPIC DUODENOJEJUNAL BYPASS WITH SLEEVE GASTRECTOMY – A SINGLE STAGE PROCEDURE IN YOUNG PATIENTS WITH BMI>50 – LONG TERM OUTCOMES, SINGLE CENTRE STUDY OF 194 PATIENTS

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Background

Sleeve gastrectomy is an established standalone procedure. However, the results are not satisfactory for those with BMI>50 and above. The acceptance of staged procedures is lesser in countries like India. Single stage malabsorption procedures like DS (Duodenal switch) or SADIS is not suitable for Indians or population with low protein intake. The unknown long-term biliary effects on the gastric mucosa makes OAGB prohibitory for the young. However, a similar BP limb with anastomosis of the jejunum to the duodenum (Sleeve-DJB) potentially solves the issue, and also takes a middle path approach. We aimed at analysing the long-term outcomes of this procedure in young morbidly patients with BMI \geq 50kg/m².

Methods

194 patients underwent DJB-SG from 2011 to 2021. 167 patients had BMI \geq 50kg/m². 126 were followed up for a period of 5 years (Mean follow up period of 4.2 years). Our initial cases were done in Roux-en-Y configuration (BP limb 50 to 75 cm and Roux limb 75 to 150 cm) which was later changed to Loop configuration with 180cm BP limb.

Results

The study population consisted of 126 patients (72 men and 54 women) in age range of 21 to 35 years (Mean Age 29.5 years). Elderly and patients individuals with BMI<50kg/m² who underwent this procedure were excluded from the study. During the follow-up period, the excess body weight loss (EBWL%) was 83% at 1 yr, 78% at 3 yrs and 71% at 5 yrs. 52 patients had diabetes and 92% of patients demonstrated prolonged remission of T2DM at 5 yrs. One patient presented with internal herniation through the retrocolic window 1 month after the operation and was managed surgically without any complication. No other minor or major complications occurred and there was no mortality in the series.

Conclusion

Laparoscopic Duodenojejunal Bypass with Sleeve Gastrectomy is safe and effective stand-alone procedure which combines ghrelin, foregut and hindgut hypotheses, and is a single stage procedure offering durable weight loss with remission of comorbidities and is recommendable especially in young Indians with BMI>50.

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LAPAROSCOPIC PARTIAL JEJUNAL DIVERSION – MID TERM (5 & 7 YEARS) EFFECT ON T2DM

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Background

Surgical procedures such as Roux-en-Y gastric bypass and sleeve gastrectomy induce rather sustained improved glycemic control in patients with type 2 diabetes mellitus (T2DM) by different mechanisms. One of the factors involved is the introduction of nutrients more quickly and distally in the small intestine.

Objective

Pre-clinically, in rodent models, positive impacts with JID/DID on glucose homeostasis, cholesterol, and body composition was demonstrated. Therefore, as a proof of concept, PJD was started in our institution in 2014 under Study-NCT02283632. Since then, after Ethics Committee and Ministry of Health approval 93 T2DM patients underwent this procedure out of the study. Treatment of the first 42 patients who were followed up for at least 2, 5 and 7 years are presented.

Methods

Laparoscopic Partial Jejunum Diversion (PJD) enables nutrients to be expedited to distal parts of jejunum and proximal parts of ileum more rapidly via side-to-side anastomosis performed laparoscopically with 60mm long linear stapler 100cm distally from Ligament of Treitz and 150cm proximally from ileocecal valve

Results

Mean age of the cohort was 55.8 years, 54.8% were female, mean BMI 34.3kg/m², 73% of patients were on insulin and OAD drugs, with T2DM duration of 10.5 years. Mean duration of PJD was 83min, mean post-op stay 2.5 days. BMI change was -12.4% at five years. Mean decrease in HbA1c at 2,5 and 7 years was -2.48 (32.3%), 3.51 (45.8%) and 2.39 (31.2%) respectively. Glycaemia dropped at 2,5 and 7 years by - 4.1 (-37.6%), -4.8 (-44.0%) and 5.5mmol/l (50.4%) respectively.

Conclusion

Laparoscopic PJD seems to be promising non-drug intervention for Type 2 diabetes for T2DM patients with poorly controlled diabetes. Further studies warranted. Major advantages are: patients able to adopt normal diet immediately post-op. Mid term (5&7years) stable glycemic control improvement. Lipid control improved as well. Partial jejunal diversion may provide an anatomy sparing, low risk, potentially reversible, metabolic procedure. It does not impose significant alterations in lifestyle.

O-157**LAPAROSCOPIC REVISIONS AFTER OPEN BARIATRIC OPERATIONS**

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Background

Laparoscopic revisional bariatric surgeries are challenging operations and specially after open previous bariatric operations. These operations need high skills and experience as well as they are increasing in number.

Objectives

This study will test the safety and feasibility of laparoscopic revisional bariatric surgeries after failed open bariatric operations in high volume obesity center.

Methods and Material

This is a case series of retrospective review of medical data of the surgical team in high volume obesity center over the period from January 2003 to December 2016 in Prince Sultan Military Medical City.

Results

The total number of the patients over 14 years were 2263 of all bariatric operations. There were 302 (14.0%) Laparoscopic revisional bariatric operations (LRBS). 28 patients (10.6% of LRBS, and 1.5% of all bariatric operations in this series) had laparoscopic revisional bariatric operations after failed open bariatric operations. They are 23 females and 5 male with age 23-63 years (Mean 41.7years), BMI 27.3-73.0 Kg/m² (Mean 45.1). 18 patients were post open VBG, 5 patients post open RYGB, 2 post leakage after sleeve, and one post open greater gastric curvature plication. All patients had revisional bariatric operations for weight regain and/ weight loss failure except two patients treated for complications one reversal of VBG and one division of gastrocutaneous fistula after open sleeve gastrectomy. There two patients post VBG converted from laparoscopic revisional to open revisional RYGB and they were the first two cases of the all experience. There were 20 patient undergone laparoscopic revisional RYGB, 2 patients had laparoscopic revisional mini gastric bypass, 2 patients had laparoscopic revisional sleeve gastrectomy, one laparoscopic revisional biliopancreatic diversion, one laparoscopic revisional greater gastric curvature plication, one reversal of VBG, one patient had laparoscopic division of gastrocutaneous fistula after open sleeve gstreectomy. No mortality. No leak.

Conclusion

LRBS is feasible and safe after open bariatric operations. These surgeries are demanding and required high surgical skills. Main indication for revision is weight regain and/or failure of weight loss as it is shown in this series.

O-158
LAPAROSCOPIC ROUX-EN-Y FISTULO-JEJUNOSTOMY IN PATIENTS WITH CHRONIC GASTRIC LEAK AFTER SLEEVE GASTRECTOMY

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Background

The most common postoperative complication of laparoscopic sleeve gastrectomy (LSG) is staple-line leak. Even if its rate following LSG has been recently reduced, management of chronic leaks remains challenging. **Objectives:** To present a series of patients treated with laparoscopic Roux-en-Y fistulo-jejunostomy (LRYFJ) for chronic gastric leak (> 12 weeks) post-LSG.

Methods

Data were prospectively gathered in an electronic database and retrospectively analyzed for all consecutive patients undergoing LRYFJ for chronic gastric leak in two specialized bariatric surgery centers. Parameters of interest were patient characteristics, intraoperative data, post-operative complications and outcomes, length of hospital stay and follow-up. Hemodynamically unstable patients and patients presenting signs of severe sepsis were excluded from this study. Laparoscopy was attempted for all patients. Surgical technique was standardized in both centers.

Results

Fourteen patients underwent LRYFJ for chronic gastric leak (12 women, 2 men). Mean age was 49.2 years while mean weight was 88.7 kg with a mean BMI of 31.1 kg/m². All procedures were successfully performed by laparoscopy, except one (7.1%) converted to open surgery. Mean operative time was 198 minutes, with mean estimated blood loss of 135.7 ml and two patients necessitating transfusion (14.2%). Mortality was null. Five postoperative complications were noted (35.7%): two leaks of the fistulojejunostomy treated by antibiotherapy and endoscopic drainage; one perianastomotic hematoma treated by relaparoscopy and antibiotherapy; one pleural effusion and one hematemesis medically treated. Mean length of hospital stay was 14 days. Mean follow-up was 40 months, all patients being in good health at last contact.

Conclusion

LRYFJ seems to be a good surgical option for the treatment of chronic gastric leaks after LSG. However, it is a challenging procedure and should be performed in experienced bariatric centers by expert bariatric surgeons. Careful patient selection is essential since this approach should only be considered in patients with adequate nutritional status and after failure of a well conducted endoscopic management.

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LAPAROSCOPIC ROUX-Y-GASTRIC BYPASS VERSUS LAPAROSCOPIC ONE-ANASTOMOSIS GASTRIC BYPASS FOR OBESITY: 3-YEAR RESULTS OF A PROSPECTIVE, RANDOMIZED CONTROLLED TRIAL

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Background

One- anastomosis gastric bypass (OAGB) is an established bariatric and metabolic procedure with promising outcomes in terms of weight loss and resolution of obesity-associated comorbidities. However, current literature lacks sufficient data about the efficacy and safety of OAGB in the setting of a randomized controlled trial (RCT).

Objectives

The aim of this single- center, non-inferiority RCT is to compare the outcomes of the laparoscopic Roux-en-Y gastric bypass (RYGB) and the laparoscopic OAGB as primary bariatric procedures. The primary endpoint was the excess weight loss (EWL) at 3 years after surgery. Secondary endpoints included morbidity and nutritional changes at 3 years postoperatively.

Methods

80 patients were randomly assigned (1:1) to OAGB or RYGB. RYGB consisted of a 150 cm alimentary limb and a 60 cm biliopancreatic limb. In OAGB the biliopancreatic limb had a defined length of 200cm.

Results

Nine (11.2%) of the 80 participants were male. One patient withdrew from the study, leaving 79 participants in the per- protocol population. Follow-up rate at 3 years was 89%. The mean age was 40.2 years (SD 0.1) and mean BMI at the time of the operation was 39.8 kg/m² (SD 3.2). Mean EWL 3 years postoperatively was 80.2% (24.1) in the RYGB group and 97.5% (20.8) in the OAGB group (p=0.002). No significant difference in the overall morbidity rate occurred between the two groups, but the rate of postoperative marginal ulcers was significantly higher in the OAGB group (28% versus 10%, p=0.048). Similar rate of reoperations was performed in both groups 3 years after surgery. Mean hemoglobin at 3 years was 134.3g/l (SD 18.2) in the RYGB group and 126.5 g/l (SD 12.8) in the OAGB group (p= 0.04). There was no difference between the two groups in terms of mean albumin and mean vitamin D3 levels, but mean prealbumin and mean parathormone levels were significantly lower in the OAGB group.

Conclusion

OAGB is not inferior to RYGB in terms of weight loss 3 years after surgery. The higher rate of marginal ulcers and nutritional deficiencies among patients undergoing OAGB warrants the need for an intensive follow-up, including upper gastrointestinal endoscopy.

O-160

LAPAROSCOPIC SLEEVE GASTRECTOMY AND ENDOSCOPIC SLEEVE GASTROPLASTY: COMPARATIVE STUDY ON THE EFFECTIVENESS IN THE TREATMENT OF OBESITY

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Background

Laparoscopic sleeve gastrectomy (LSG) is currently the most frequently performed bariatric procedure worldwide. Endoscopic Sleeve Gastroplasty (ESG) has emerged as an effective and less-invasive option for weight loss. Its effects aim to be similar to Laparoscopic Sleeve Gastrectomy (LSG). However, its efficacy and safety compared with LSG is unclear.

Objectives

The aim of the study is to compare ESG and LSG bariatric effectiveness at a 3, 6 and 12 months-follow-up.

Methods

Follow-up was performed 3, 6 and 12 months after LSG and ESG. Patient 's demographic and preoperative characteristic were considered, such as sex, age and preoperative BMI. Post-operative outcomes of interest were: BMI, percental excess weight loss (%EWL), percental total body weight loss (%TBWL), fat mass (FM), fat free mass (FFM), Phase angle (PhA).

Results

Seventy patients, including 41 ESG (BMI 36.68 ± 3.13 Kg/m²) and 29 LSG (BMI 41.59 ± 4.03 Kg/m²), were included. No difference in terms of age and sex were found between the two groups. At a 12 months-follow-up %EWL and %TBWL were found to be significant lower in ESG group ($p=0.001$ for both the variables) when compared to LSG group. No significant difference in terms of body composition and PhA was registered. At 12 months-follow-up mean FM, FFM and PhA were 26.84 ± 6.17 , 50.84 ± 6.71 and 6.01 ± 0.63 in ESG group and 28.96 ± 11.83 , 50.27 ± 7.52 and 5.71 ± 0.58 in LSG group, with no significant difference observe ($p= 0.501$, $p= 0.799$ and $p=0.155$, respectively). A significant lower BMI (27.86 ± 4.86) was also reported in LSG patients when compared to ESG patients (BMI 30.77 ± 2.83) ($p=0.008$).

Conclusion

According to our results, LSG is a more effective bariatric procedure than ESG. LSG patients achieved higher %TBWL and %EWL at 3,6 and 12 months-follow-up after the procedure. Larger studies with longer follow-ups are necessary to draw definitive conclusions.

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LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS LONG-TERM RESULTS

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Background

Laparoscopic Roux-en-Y gastric bypass (LRYGP) is one of the most common bariatric surgeries in the world. It has shown positive results with a sustainable weight loss and control of related diseases specifically type 2 diabetes mellitus and hypertension. Long-term follow-up leads to improvement of patient outcomes.

Objectives

The primary objective was to evaluate the total weight loss and excess weight loss achieved in a long-term follow-up (>5 years) and the complete and partial remission of related diseases.

Methods

Retrospective analysis of patients that were submitted to LRYGB from January 2015 to December 2017 in a single institution (Academic Referral Center). All procedures were standardized and performed by the same surgical team.

Results

Data analysis of the 46 eligible patients showed that the excess weight loss at 12 months was $80.5\% \pm 15.7$ and at 60 months was $74.1\% \pm 22$, total weight loss at 12 months was $32.8\% \pm 9.5$ and at 60 months was $29\% \pm 13.3$. Complete remission of diabetes after 60 months was 38.8% and partial remission after 60 months was 16.7%. Hypertension remission after 60 months was of 92.3%. Of all patients that used insulin preoperatively, none of them needed it after surgery. Failure of treatment, in terms of excess weight loss (<50%), after 60 months was 15.2%. There were 10 cases of postoperative complications, none of which required another surgical procedure and there were no cases of mortality.

Conclusion

In the 5-year follow-up of this study, LRYGB showed high efficacy for sustained excess weight loss, total weight loss, and remission of related diseases, similar to the literature found internationally. This procedure is safe and feasible with excellent outcomes.

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LAPAROSCOPIC-ASSISTED TRANSVERSUS ABDOMINIS PLANE BLOCK VERSUS PORT-SITE INFILTRATION WITH LOCAL ANESTHETICS IN BARIATRIC SURGERY: A DOUBLE-BLIND RANDOMIZED CONTROLLED TRIAL

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Background

Adequate pain control after surgery is of utmost importance to reduce complications, length of hospital stays, and, ultimately, costs. Transversus abdominis plane block (TAPB) is a relatively new pain management technique, and its benefits were preliminarily proven in people with obesity undergoing laparoscopic bariatric procedures.

Objectives

This study aimed to assess the effectiveness of TAPB in patients undergoing either primary or revisional bariatric surgery.

Methods

In this prospective randomized double-blind controlled trial, we enrolled patients undergoing bariatric surgery from July 2020 to July 2021. Patients were randomly allocated into the TAPB group (n = 51) or the port-site infiltration (PSI) group (n = 62). Both groups received a solution of 40 ml Ropivacaine 0.25%. We included patients undergoing any type of bariatric surgery, no exclusion criteria were applied. The primary endpoint was the pain on the visual analogue scale (VAS) 24 hours after operation. Secondary endpoints were VAS at 3, 6, 12 and 18 hours, complications, time of first walk and flatus, operative time, length of hospital stay, the need for additional drugs.

Results

We randomized 51 patients in the TAPB group and 62 patients in the PSI group. No anesthetic infiltration-related complication was recorded. At 24 hours after surgery, pain on the VAS was 2.5 ± 2.6 vs 2.3 ± 2.1 (p=0.661) in the TAPB and PSI groups, respectively. Similar results were found at 3, 6, 12 and 18 hours. No significant differences were found in operative time, time of first flatus and first walk, as well as length of hospital stay and overall satisfaction score.

Conclusion

Laparoscopic TAPB and PSI with local anesthetics have similar clinical outcomes. Both are valid methods to improve postoperative pain management in patients undergoing bariatric surgery.

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LEVERAGING INDUSTRY RESOURCES TO BUILD A SUCCESSFUL OUTPATIENT CENTER FOR BARIATRIC SURGERY

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Introduction

Establishing a new bariatric outpatient-focused surgical practice in a mature market can be associated with poor results and inability to sustain growth. Traditional practice building methods may be outdated in today's digital age. Innovative marketing approaches and industry partnerships are paramount to success. Although many practice-building industry resources are available to surgeons, we found that most practitioners are unaware of their existence. We sought to identify which of the industry-driven initiatives were most beneficial to success in our case.

Methods

A new bariatric private practice was established in the Minneapolis, USA in 2020. It offers obesity medication management, endoluminal bariatrics and inpatient and outpatient bariatric surgery services. Marketing efforts have intensified in the last 12 months, using a combination of paid advertising, website blogs, and industry partnerships. We leveraged relationships with Medtronic, Apollo Endosurgery and NovoNordisk to use their respective resources and build each segment of our practice. These included co-advertising with Apollo Endosurgery, using a Medtronic-sponsored virtual health management platform and patient engagement app, and participating in a pilot collaboration with a patient-to-patient mentoring program.

Results

The number of new website users was 43,218. During this timeframe, we evaluated 172 new medical obesity management consults, performed 30 endobariatric outpatient cases and 70 bariatric stapling cases (35 inpatient and 35 outpatient). Although no direct marketing was performed towards medication management, we found that a medical weight loss program leads to organic growth and attracts patients that may not be initially interested in more invasive procedures. We noticed spikes in the website traffic which correlated with increased number of consults and downstream operative cases during co-advertising campaigns and times radio ads were used. The patient engagement app contributed to patient retention and helped decrease practice costs. Lastly, the patient-to-patient mentoring pilot increased the number of leads and contributed to both organic and paid growth.

Conclusions

Organic and paid marketing efforts are necessary when establishing a new weight loss practice. Industry resources are widely available and, when used responsibly, can increase patient awareness, satisfaction and retention. Collaboration with industry is beneficial for practice growth.

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LINX MAGNETIC SPHINCTER AUGMENTATION PLACEMENT FOR MANAGEMENT OF POST-SLEEVE GASTRECTOMY GASTRO-ESOPHAGEAL REFLUX: A META-ANALYSIS

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Background

Surgical revision for gastro-esophageal reflux (GERD) following sleeve gastrectomy is needed in up to 5%. The usual surgical intervention is conversion to Roux-en-y gastric bypass (RYGB). However, revisional RYGB is associated with a comparatively high complication rate and can result in severe adverse events. Therefore, increasingly there is interest in the use of LINX magnetic sphincter augmentation (MSA) at the gastro-oesophageal junction to manage GERD both primarily and following sleeve gastrectomy. The study reports a meta-analysis of the impact of LINX MSA placement on GERD symptoms following sleeve gastrectomy.

Methods

Medline, Embase, conference proceedings and reference lists were searched for studies assessing LINX MSA placement in patients with GERD following sleeve gastrectomy. The primary outcome was Gastro-oesophageal Reflux Disease-Health-Related Quality of Life (GERD-HRQL) pre- and post-LINX MSA placement. Secondary outcomes were the development of serious postoperative complications and the need for device removal.

Results

Four studies including 72 patients (60 (83% female) with median age 48 years) undergoing placement of LINX MSA in patients with GERD following sleeve gastrectomy were included. Maximal study follow-up ranged from 1 and 61 months. A clinically and statistically significant reduction in GERD-HRQL was noted following LINX MSA placement (weighted mean difference -24.73; 95% CI -13.09 to -36.36; $p < 0.001$). There were 6 (8%) serious complications (5 dysphagia; 1 prolonged pain) and 3 (4%) device removals reported during study follow-up.

Conclusion

A meaningful reduction in patient reported quality of life is seen after LINX MSA placement to manage post-sleeve gastrectomy GERD. Therefore LINX placement could play a role in managing post-sleeve GERD in patients unable or unwilling to proceed with RYGB.

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LIVER BACTERIAL COLONIZATION IN PATIENTS WITH OBESITY AND GUT DYSBIOSIS

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Background

Recently, the link between the gut microbiota, liver inflammation and obesity has become an interested focus of research. The main hypothesis would be a modification of the intestinal barrier enabling the passage of pro-inflammatory metabolites. However, the link with the potential bacterial presence into the hepatic level has never been studied.

Objectives

The aim of this study was to show the possible relation between the gut microbiota dysbiosis in patients with obesity and the presence of bacterial genome in their liver biopsies.

Methods

All patients treated in the bariatric surgery department who have undergone a liver biopsy and pre-surgical analysis of the intestinal microbiota are analysed retrospectively. Anthropometric and metabolic data, co-morbidities, stool samples and hepatic biopsies were collected and analysed at the time of surgery. The V3-16S rRNA region was sequenced using Ion Torrent new generation sequencing platform.

Results

In each of the 23 patients enrolled, the bacterial population was analysed both in stools and liver. In 8 patients (34,7%), Prevotella (62,5%), Bacteroides (50%), Dalister (12,5%), Streptococcus (12,5%) were found in both samples, simultaneously; in 15 cases the liver was free from colonization. The statistically significant difference between groups was a Roseburia intestinalis reduction in faecal samples of patients with liver biopsies colonized by bacteria (1% vs 3%; p=0,0339).

Conclusion

At the best of our knowledge, this is the first study reporting the presence of bacterial genome in a liver biopsy on patients with obesity, instead of the microbe associated molecular patterns. Notably, in literature the presence of Roseburia intestinalis in stool sample has been shown to prevent intestinal inflammation playing its role in the gut barriers integrity. In our population, the Roseburia reduction was associated with the presence of bacterial genome in the liver, probably related with a greater permeability of the gut and vascular barriers.

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LIVER FIBROSIS AFTER DUODENOILEAL DIVERSION WITH SELF-ASSEMBLING MAGNETS RESULTS AT 12 & 24 MONTHS

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Background

Obesity is strongly related to non-alcoholic fatty liver disease (NAFLD). Early stages of NAFLD are usually harmless but can lead to serious liver damage, including cirrhosis. Metabolic surgery can help improve liver function and stop fibrosis.

Objectives

We aimed to assess liver fibrosis results after surgery with duodenal-ileal anastomosis without stomach restriction through self-assembling laparo-endoscopic magnets with Fibroscan results after 12 and 24 months of the procedure.

Methods

Between 2019 and 2020, we conducted an open-label, prospective, single-arm study including obese patients (BMI 30-50 kg/m²) with Type 2 diabetes mellitus (T2DM). The primary endpoints were to reduce liver fibrosis and improve liver function by measuring hepatic fibrosis with Fibroscan at 12 and 24 months. The second endpoint was to measure weight loss during the period analyzed.

Results

A total of 13 patients were included; the median age was 47.3 (34-67) years, and 53.3% were males. Median BMI was 39.6 kg/m² (+/- 3.7). The mean baseline results on Fibroscan were 9.57 kPa [F2-F3]. The mean duration of the procedure was 66,8 min (range:41-95). No intraoperative complications were recorded. A protocol that required overnight stay led to a mean hospital stay of 24 hours. Magnets were expelled at a median of 26 days after the procedure with no associated complications. At 12 months after the procedure, 7 of 13 patients (53%) had fibrosis stage reduction, 5 (38%) had no change, and 1 (8%) had fibrosis stage increase. The mean of Fibroscan liver stiffness measurement decreased from a baseline of 9.57 kPa [F2-F3] to 7.07 kPa [F1-F2], suggesting an overall reduction of 1 fibrosis stage. At 24 months, the mean Fibroscan liver stiffness measurement was 7.65 kPa [F1-F2], suggesting maintenance of overall reduction of the fibrosis stage. Greater than 5% total body weight loss was observed in 6 (75%) patients at 12 months (p=0.005) and 15% in 5 (62.5%) patients at 24 months (p=0.017).

Conclusions

Duodenal-ileal anastomosis diversion with self-assembling magnets in obese patients with T2DM is associated with positive metabolic outcomes. Fibroscan measurement showed a significant reduction in fibrosis staging.

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LONG TERM RESULTS > 5 YEARS COMPARATIVE STUDY BETWEEN 40-45 BMI PATIENTS UNDERGOING GASTRIC BYPASS AND VERTICAL GASTRECTOMY

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Background

Patients with obesity have a chronic disease. Increased body fat is associated with a greatest risk to health. Alarming growth in recent years. Great economic burden. High mortality rate. Different surgical techniques are used.

Objetives

Compare the results of weight loss at 5 years, Hypertension, Sleep apnea, Dyslipidemia, Diabetes mellitus type II, Mineralo-vitamin deficiencies in the postoperative period (Iron, Calcium, Vit D and Vitamin B 12). Morbidity and mortality of both surgical techniques. Evolution of health-related quality of life. Surgical time. Cost of surgical material.

Type of Study

Descriptive, comparative and analytical study without specific intervention obtained from the prospective Bariatric Surgery database, which records all patients operated in the University Hospital of Alava since 1992.

Methods

106 morbidly obese patients with a BMI between 40 and 45 Kg/m² have been selected. operated by gastric by-pass and vertical gastrectomy between 1997 and 2010 with at least 5 years of postoperative follow-up. A sample size calculation has been performed. The literature establishes that there is a mean difference in BMI between the two groups of 2.2 with a standard deviation of 4. With a confidence level of 95% and a precision of 10 points, it is estimated that 106 should be recruited. patients (53 patients per branch). Both groups are homogeneous and can be compared statistically.

Results

We present the results of all the items we study with different tables and figures.

Conclusions

Gastric bypass achieves greater weight loss at 5 years, although the difference does not reach statistical significance. Both techniques are safe, with zero mortality and few complications. Both techniques produce an improvement in type II diabetes mellitus, hypertension, dyslipidemia, and obstructive sleep apnea at 5 years. Improvement in the perception of health-related quality of life in both groups. Patients operated on by gastric bypass requires more vitamin and mineral supplements at 5 years. The laparoscopic vertical gastrectomy is a procedure that lasts less than laparoscopic gastric By-pass. Laparoscopic Sleeve gastrectomy is a cheaper procedure than Gastric By-pass.

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LONG-TERM CANCER OUTCOMES AFTER FOUR BARIATRIC SURGICAL PROCEDURES

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Background

Obesity is associated with increased cancer risk. Due to substantial and sustained weight loss following bariatric surgery, post-surgical patients are ideal to study the association of weight loss and cancer.

Objective

Compare cancer incidence and mortality for up to 38 years in post-bariatric surgery patients and non-surgical subjects with severe obesity.

Methods

Retrospectively (1982-2019), 21,837 patients who underwent metabolic-bariatric surgery (surgery, 1982-2018) were matched 1:1 by age, sex, and BMI with subjects who did not have surgery. Procedures included gastric bypass, gastric banding, sleeve gastrectomy, and duodenal switch. Primary outcomes included cancer incidence and mortality, stratified by obesity- and non-obesity-related cancers, sex, cancer stage, and procedure.

Results

Bariatric surgery patients had 25% lower risk of developing any cancers compared with non-surgery subjects (hazard ratio (HR) 0.75; 95% CI, 0.69-0.81; $p < 0.001$). Cancer incidence was lower among female (HR 0.67; 95% CI, 0.62-0.74; $p < 0.001$) but not male surgical patients, with the HR lower for females than for males ($p < 0.001$). Female surgical patients had 41% lower risk for obesity related cancers (i.e., breast, ovarian, uterine, and colon) compared with non-surgical female subjects; HR 0.59; 95% CI, 0.52-0.66; $p < 0.001$. Cancer mortality was significantly lower after surgery in females (HR 0.53; 95% CI, 0.44-0.64; $p < 0.001$).

Conclusions

Metabolic-bariatric surgery was associated with lower all-cancer and obesity-related cancer incidence among female patients. Cancer mortality was significantly lower among female surgery patients compared to matched non-surgical controls.

O-169

LONG-TERM EFFECTS OF BARIATRIC SURGERY VS STANDARD CARE ON INSULIN SECRETION AND INSULIN SENSITIVITY

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Background and aims

Bariatric surgery is highly effective to achieve weight loss, improve glycemia and even reach diabetes remission within a few months in most obese patients. We studied the long-term effects (>10 years) of sleeve gastrectomy (SG) or Roux-en-Y gastric bypass (RYGB) surgery versus standard care (SC) on diabetes prevalence, BMI, insulin sensitivity and secretion in a cohort of deeply phenotyped patients.

Material and methods

Patients presenting at a university medical center for evaluation of obesity and potential bariatric surgery were recruited at baseline after informed consent (N=604). All patients who were available and agreed to a re-examination (N=117) were evaluated after a median follow-up of 11.2 years (IQR 8.5-13.2). All participants without known diabetes received 5-point 75 g OGTTs. From patients with known diabetes, a fasted blood sample was taken. Insulin sensitivity was assessed with Matsuda index, insulin secretion was calculated from $AUC_{Cpeptid_{0-30}}/AUC_{Glucose_{0-30}}$. Patients received either bariatric surgery or standard care. We analyzed long-term effects on BMI, insulin sensitivity, insulin secretion and diabetes prevalence with generalized linear models.

Results

Of 117 patients with follow-up, 42 underwent SG and 13 RYGB surgery. In patients with SC, BMI increased by 1.01 [-2.94, 2.43] kg/m², while patients with SG and RYGB reduced their BMI by 11.66 [6.85, 17.93] and 8.36 [5.71, 12.53] kg/m², respectively. RYGB was associated with higher insulin sensitivity at follow-up compared to SC (p=0.016, adjusted for age, sex, follow-up interval, BMI_{baseline}, insulin sensitivity_{baseline}), but not SG. In contrast, only SG was associated with higher insulin secretion at follow-up, compared to SC (p<0.001, adjusted for age, sex, follow-up interval, BMI_{baseline}, insulin secretion_{baseline}, insulin sensitivity_{follow up}). In a logistic regression model adjusted for diabetes status_{baseline}, BMI_{baseline}, age, sex and follow-up interval, diabetes prevalence at follow-up had a trend for negative association with SG, compared to SC (p=0.09) but not with bypass surgery (p=0.99).

Conclusion

Over a follow up of 10 years, bariatric surgery techniques differently impact insulin sensitivity and insulin secretion. Additional factors beyond bariatric surgery might have a stronger impact on diabetes outcome in the long term.

O-170
LONG-TERM OUTCOMES AFTER SLEEVE GASTRECTOMY WITH ANTERIOR HEMIFUNDPLICATION

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Background

Persistent, worse, or new symptoms of gastroesophageal reflux disease (GERD) are common after laparoscopic sleeve gastrectomy (SG) and can be difficult to manage. These symptoms may be improved by combining SG with fundoplication.

Objective

Describe reflux outcomes following sleeve gastrectomy and fundoplication compared to standard sleeve gastrectomy.

Methods

We conducted a cohort study on all patients who underwent SG with anterior hemifundoplication (SGAF), with a 2:1 comparison group who underwent SG without fundoplication. GERD symptoms were assessed using a structured symptom questionnaire.

Results

SGAF was performed in 36 patients between 2010-2015; 26 patients were available for follow-up and 17 of these were followed up for more than 6 years (median 118 months). The comparison group included 53 consecutive contactable patients who underwent SG without fundoplication during the same period. The two patient groups were similar with regard to pre-operative factors, weight loss, and weight regain. SGAF provided superior control of symptomatic GERD: after more than 6 years, 71% of SGAF patients reported no GERD symptoms compared to 17% of SG patients. GERD symptoms were improved or unchanged compared to pre-operative symptoms in 82.4% of patients after SGAF, whereas GERD symptoms worsened (worse symptoms or developed new symptoms) in 58.5% of patients after SG. PPI use was similar in both groups. Six of 26 (23%) SGAF patients underwent resection of the fundoplication with conversion to a standard SG or RYGB due to pouch dilatation resulting in dysphagia, weight regain, and other symptoms.

Conclusion

SGAF provided significantly better GERD outcomes than SG but dilatation of the fundoplication led to a high reoperation rate. SGAF shows promise for the treatment of obesity and GERD and for preventing post-sleeve GERD, but strategies to reduce the reoperation rate would be beneficial.

O-171

LONG-TERM OUTCOMES OF ONE-ANASTOMOSIS GASTRIC BYPASS AND SLEEVE GASTRECTOMY AS A REVISION AFTER LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING

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Purpose

Laparoscopic adjustable gastric banding (LAGB) popularity has declined through the years, mainly due to high rates of weight regain/insufficient weight loss (WR/IWL). This study reports outcomes of patients undergoing conversion of LAGB to Sleeve Gastrectomy (SG) and One Anastomosis Gastric Bypass (OAGB).

Materials and Methods

A single-center comparative study of outcomes of conversion to OAGB or SG following LAGB due to WR/IWL.

Results

In the study, 276 patients were included; 151 underwent SG and 125 underwent OAGB. There was no significant difference in baseline characteristics except the mean time interval between surgeries was significantly higher for OAGB (10.9 years versus 8.9 years). The rate of major complications was 3.2% with no significant difference between groups. The mean follow-up time was 48.6 months for OAGB and 108.3 months for SG. The mean Body Mass Index at last follow-up was significantly lower in the OAGB group (31.3 versus 34.5; $p=0.002$), the mean percentage of total weight loss (%TWL) was higher in the OAGB group (25.1% versus 18.8%; $p=0.003$). There was higher rate of patients with resolution of type 2 diabetes (T2D) and hypertension (HTN) in the OAGB group (93.3% versus 63.1%; $p=0.02$ and 84.6% and 61.7%; $p=0.04$, respectively). Revisional surgery was required in 6% of SG group and 4% of OAGB group with no significant difference.

Conclusion

OAGB as a revisional surgery after LAGB for IWL/WR is associated with significantly higher %TWL and resolution of T2D and HTN when compared to SG.

O-172
LONG-TERM OUTCOMES OF SLEEVE GASTRECTOMY FOR SEVERE OBESITY IN KOREA

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Introduction

Recent clinical studies have suggested sleeve gastrectomy is the most performed effective treatment modality for severe obesity. However, long-term data after sleeve gastrectomy has not been investigated in Korea.

Objectives

This study aims to evaluate the long-term effects of sleeve gastrectomy in large surgical patient populations with obesity. In addition, we evaluate whether weight changes can lead not only to improved co-morbidities but also to the quality of life.

Methods

We retrospectively reviewed patients who underwent sleeve gastrectomy from 2007 to 2022. We evaluated long-term (≥ 60 months) outcomes including primary and secondary sleeve gastrectomy.

Results

859 patients who underwent sleeve gastrectomy from 2007 to 2022 were included. Among them, a total of 321 patients answered the online questionnaire survey. The mean age at the time of surgery was 34.8 ± 4.1 years. The mean weight was 99.96 ± 17.76 kg and the mean body mass index (BMI) was 36.82 ± 5.21 kg/m² preoperatively. The BMI in the postoperative third, fifth, seventh, and tenth years was 25.74 ± 4.09 , 26.19 ± 4.36 , 26.39 ± 4.36 , and 28.65 ± 2.21 , respectively. The percentage of total weight loss in the postoperative third, fifth, seventh, and tenth year was 30.01 ± 9.64 , 28.05 ± 11.01 , 30.25 ± 10.30 , and 24.96 ± 11.72 , respectively. The percentage of excess BMI loss (%EBL) in the postoperative third, fifth, seventh, and tenth year was 88.89 ± 57.28 , 78.69 ± 31.02 , 78.08 ± 23.37 , and $60.08 \pm 17.94\%$, respectively. There was no 30-day peri-operative mortality. The complication rates within 30 days were 1.75% including 4 bleeding, 1 leak, 1 subphrenic abscess, 1 small bowel injury, and 1 bile duct injury.

Conclusion

These findings show that sleeve gastrectomy is a safe and effective long-term bariatric-metabolic surgery option for severe obesity in Korea. Randomized prospective control studies between sleeve gastrectomy or Roux-en-Y gastric bypass are needed to confirm the long-term bariatric-metabolic effects and safety for Asian populations with severe obesity.

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LONG-TERM RESULTS AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY: MORE THAN 10 YEARS FOLLOW-UP IN A SINGLE TERTIARY CENTER

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Background

Laparoscopic sleeve gastrectomy (LSG) has established as an effective treatment for severe obesity and is now the commonest performed bariatric operation worldwide. However, there are paucity of data addressing its long-term outcome.

Objectives

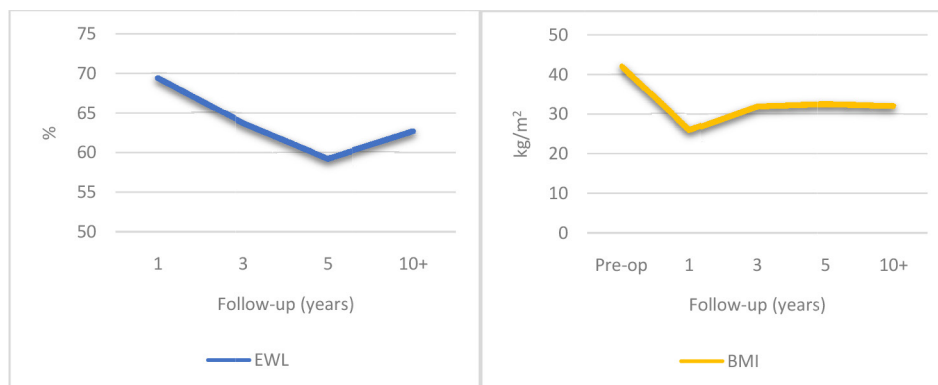
This study aims to investigate the long-term weight loss, co-morbidity outcomes, nutritional status, and complication rates after LSG in Chinese patients with a follow-up period of at least 10 years.

Methods

A retrospective analysis of a prospectively collected database and all patients who underwent LSG between 2006 to 2012 were reviewed. Body weight, comorbidity status, nutritional status and long-term complications were evaluated.

Results

During the period, LSG was performed in 110 Chinese patients (54% female, mean age 38 ± 11 years) with a mean preoperative body mass index (BMI) of $42.0 \pm 6.4 \text{ kg/m}^2$. Two patients with Prader-Willi syndrome were excluded. 83 (75%) patients had completed more than 10 years follow-up (mean 12 ± 2 years) with $62.6 \pm 33.7\%$ mean excess weight loss (EWL). Remission of obstructive sleep apnea and type 2 diabetes mellitus occurred in 81% and 39% respectively, while LSG has less impact on hypertension and hyperlipidemia. Of interest, long-term nutritional deficiency was observed only in 19% of patients. 62% of patients had de novo or worsen gastro-esophageal reflux disease (GERD), of which 87% required regular use of proton pump inhibitor (PPI). 12 patients underwent revisional bypass surgery due to weight regain ($n=7$), stricture ($n=2$) and GERD ($n=3$). 2 patients passed away years after operation due to cancer and stroke.



Conclusion

LSG can achieve sustainable weight loss and improvement of comorbidities beyond 10 years. Long-term nutritional deficiency is uncommon. However, there is high incidence of postoperative GERD which remains a significant issue for LSG.

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LONG-TERM RESULTS FROM THE SWISS MULTICENTER RANDOMIZED CONTROLLED TRIAL THAT COMPARES LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS (LRYGB) WITH LAPAROSCOPIC SLEEVE GASTRECTOMY (LSG) FOR PATIENTS WITH OBESIT

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Background

Long-term results from the Swiss multicenter randomized controlled trial that compares laparoscopic Roux-en-Y gastric bypass (LRYGB) with laparoscopic sleeve gastrectomy (LSG) for patients with obesity.

Methods

Initially, 217 patients with a body-mass index (BMI) >35kg/m² were randomly assigned to receive LRYGB or LSG at four bariatric centers in Switzerland. However, data beyond five years were not provided by one participating center. Therefore, this study reports outcomes at 10 years of 188 patients from 3 centers. Primary endpoint was percentage excess BMI loss (%EBMIL), while secondary endpoints were percentage total weight loss (%TWL), evolution of comorbidities, complications, and reoperations. The primary endpoint was analyzed both for intention to treat (ITT) and per protocol (PP).

Results

Of the 188 patients, 95 were randomized to LRYGB and 93 to LSG. 141 were women (75%), mean age was 42.4±11.0 years and the mean baseline BMI 43.9±5.5kg/m². 76% of patients had a completed follow-up of 10 years. In the ITT population mean %EBMIL was 63.7±25.8% after LRYGB and 60.3±24.1% after LSG (p = 0.44), %TWL was not different between LRYGB and LSG (26.6±10.4% and 25.0±9.8%, p=0.35). LRYGB had significantly higher %EBMIL compared to LSG after 10 years in the PP population (64.7±25.4% versus 54.6±21.0%, p=0.04). However, %TWL did not reach significance (LRYGB 27.0±10.2%, LSG 23.5±9.4%, p=0.096). Higher remission rates for dyslipidemia were observed in the LRYGB group than after LSG (p<0.01), while more LSG patients reported significantly more symptoms of gastroesophageal reflux disease compared to LRYGB (p=0.002). Additionally, patients after LSG had significantly higher rates for conversion because of insufficient weight reduction or reflux compared to LRYGB (32.3% versus 6.3%, p<0.01). Overall reoperation rate was 23.1% for LRYGB and 32.3% for LSG (p=0.28).

Conclusions

LRYGB leads to significantly higher %EBMIL in PP population compared to LSG at 10 years. Improvement of comorbidities is similar except for gastroesophageal reflux disease and dyslipidemia that seem to be better controlled by LRYGB. LSG patients experienced a significantly higher number of conversions to different anatomy compared to LRYGB.

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LSG AS A FIRST STEP PROCEDURE FOR ONCOLOGIC PURPOSE: AN INDICATION BEYOND THE NEW GUIDELINES

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Background

Obesity has been attributed as a risk factor for cancer. Obesity has also been established as a risk factor for post-operative complications; it was shown to increase operative time, blood loss, hospital stay, and rates of surgical site occurrence, deep vein thrombosis (DVT) and mortality. The laparoscopic sleeve gastrectomy (LSG) is now established as a fast and effective way for weight loss.

Objective

Our aim is to present the LSG as a first step approach for patient with a known malignancy, providing acceptable rapid weight loss, and therefore decreasing the rate of complications of the oncologic intervention.

Methods

We conducted a retrospective review of a prospectively collected data, from 2008 until 2023, we analyzed all the patients with severe obesity suffering from a concomitant malignancy, who underwent a laparoscopic sleeve gastrectomy prior to a definitive oncologic procedure.

Results

Our series included 5 patients with severe obesity, there were 3 males and 2 females. All 5 patients were deemed inoperable due to their severe obesity. Mean initial weight was 137 Kg and mean initial body mass index (BMI) was 47,4 Kg/, malignancies were renal clear cell carcinoma, duodenal peri-ampullary neuroendocrine tumor, rectal adenocarcinoma, and 2 cases of prostate cancer. After undergoing LSG, and after reaching a mean percent excess weight loss (%EWL) of 40,5%, 4 patients underwent definitive treatment for their malignancy. The last patient with rectal adenocarcinoma underwent a LSG and achieved a %EWL of 25% in 1,5 months, he is planned to have a definitive treatment 6 months after the LSG. We had one DVT and one portal vein thrombosis after the LSG, both treated medically. There was no mortality.

Conclusion

The LSG may be a safe and a beneficial first step approach to patients with severe obesity and a concomitant known but carefully selected malignancy, providing them with rapid weight loss, reducing the rate of complications of the oncologic procedure, and making it feasible.

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MACHINE LEARNING FOR PREDICTING FACTORS ON TYPE 2 DIABETES REMISSION AFTER METABOLIC BARIATRIC SURGERY

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Background

There are several prediction models for type 2 diabetes remission after bariatric metabolic surgery. However, accurate prediction is still challenging because of the complexity of factors involved in diabetes remission.

Objectives

We aimed to reveal the factors for diabetes remission, employing a machine learning model, extreme gradient boosting (XGBoost).

Methods

We analyzed 56 feature values (clinical parameters) in 274 Japanese patients with severe obesity and type 2 diabetes who underwent sleeve gastrectomy in our center between January 2007 and December 2020. The feature values include preoperative clinical information, including blood biochemistry findings, obesity-related disorders, and visceral and subcutaneous fat areas derived from computed tomography. SHapley Additive exPlanations (SHAP) values were calculated to show the importance of the values.

Results

87.6% of the patients showed clinical remission, HbA1c<6.5 without medications at one year follow-up period. The predicting model using XGBoost demonstrated good discrimination; the area under the receiver operating characteristic curve was 1.0. The highest importance variables were duration of diabetes, followed by gamma-glutamyl transpeptidase (GGT), the visceral and subcutaneous fat area ratio, C-peptide index, alkaline phosphatase (ALP), visceral fat area, and age. Of note, higher GGT and higher ALP, known as markers for non-alcoholic fatty liver disease (NAFLD), and lower visceral fat area were positive predictors for diabetes remission.

Conclusion

Not only variables related to preserved beta-cell function but also NAFLD and visceral fat were important factors for predicting diabetes remission in our model. Validation in other datasets is needed to ensure universal applicability.

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MACROPHAGE POLARIZATION IN PATIENTS WITH OBESITY AND DIABETES AND ITS POTENTIAL ROLE AS A PREDICTIVE MARKER OF DIABETIC IMPROVEMENT AFTER BARIATRIC SURGERY

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Background

Proinflammatory M1 macrophages are more abundant than anti-inflammatory M2 macrophages in adipose tissue of patients with obesity, and the inflammation caused by the adipose tissue of patients with obesity is considered as one of the pathophysiologies of patients with obesity and diabetes.

Objectives

The study aimed to analyze the degree of macrophage polarization and other inflammatory indices in visceral fat according to the presence of obesity and diabetes. Also, we explored the possibility of preoperative M1 polarization as a predictor for diabetic improvement after bariatric surgery.

Methods

Experimental group [patients with obesity (BMI \geq 30) and diabetes], control 1 (patients with obesity and without diabetes), control 2 [early gastric cancer (EGC) with BMI $<$ 25 with diabetes], and control 3 (EGC with BMI $<$ 25 without diabetes) were classified. Adipose tissue was collected from greater omentum during the surgery. Correlations between preoperative M1 polarization (high M1 proportion and M1/M2 ratio) to inflammatory indices (leukocyte, neutrophil, lymphocyte, monocyte, and CRP) and clinical parameters (ABCD, IMS, DiaRem, and Ad-DiaRem score) were evaluated. Predictability of M1 polarization and clinical parameters for postoperative HbA1c improvement were evaluated.

Results

Eighty-one patients were enrolled; 20 patients for experimental group, control group 1 and 2 each, and 21 patients for control group 3. Patients with obesity (experimental group and control group 1) showed high values in macrophage ($p<0.001$) and M1 proportion ($p=0.008$). Especially, experimental group revealed numerically high M1/M2 ratio. M1 polarization of experimental group correlated to several inflammatory indices, rather the other groups showed minimal correlations. Higher M1 polarization correlated to better HbA1c improvement postoperatively, and M1 polarization showed early postoperative period predictability (postoperative 3, 6, 12-month, $p<0.05$) differently from the other parameters (postoperative 6-month or more).

Conclusion

M1 polarization and inflammation of adipose tissue of patients with obesity were associated with the diabetic state. Preoperative M1 polarization is eligible as a predictor for diabetic improvement, and its early postoperative period predictability is promising.

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MAGDI: SIDE-TO-SIDE LINEAR MAGNETIC DUODENO-ILEOSTOMY FOR OBESITY WITH OR WITHOUT TYPE 2 DIABETES MELLITUS: A MULTI-INSTITUTIONAL STUDY

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Background

The Linear Magnetic Anastomosis System was developed to perform a side-to-side duodeno-ileal anastomosis without enterotomy by combination of flexible endoscopy and laparoscopy.

Objectives

Study aims were to determine efficacy and safety.

Methods

Side-to-side MAGDI was performed by endoscopic delivery of a distal magnet to the ileum (250 cm from caecum) and a proximal magnet to the first duodenum; magnets were brought together with laparoscopy.

Results

From 11/21, of 49 patients, 20 (40.8%) magnets alone after prior sleeve gastrectomy (SG), 5 (10.2%) magnets alone without SG, and 24 (49%) received Linear Magnets + SG. In 38 patients recently analyzed, Mean age, 44.0±1.4 years; 87 % female; weight (kg) 116.8±3.3; body mass index (BMI, kg/m²) 43.0±0.8; type 2 diabetes (T2DM), 26.3% (10/38). All (100.0%) Linear Magnets achieved patent anastomoses, passing per anus. At 90 days, weight was 100.0±3.2, BMI 37.1±0.8. Linear Magnets alone had a total weight loss (TWL) of 6.0±1.4%; excess weight loss (EWL) 15.9±3.9%. Linear Magnets+SG: TWL 19.5±0.7% and EWL 45.4±2.2%. Total HbA_{1c} (%) was reduced from 5.8±0.2 to 5.3±0.1; glucose from 102.4±4.2 to 93.5±2.1 mg/dL; 50.0% of patients with T2DM were off medications. TWL at 12 months was 34.0±1.4%; EWL 80.2±6.6%; BMI reduction, 15.1. Mean HbA_{1c} (%) dropped 2.0; and glucose dropped 47.0 mg/dL. Within 30 days, 34 adverse events were noted (Clavien-Dindo: 33.0% Grade I, 17.0% Grade II, 15.0% Grade III, no Grade IV or V). No adverse events were related to the Linear Magnets. There were no anastomotic leaks, bleeds, infections, or deaths.

Conclusion

Anastomosis using the Linear Magnets to achieve side-to-side Duodeno-Ileostomy bipartition in adults with obesity with or without T2DM appeared efficacious and safe.

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MALABSORPTIVE SURGERY IN ELDERLY PATIENTS: OUTCOME ANALYSIS

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Background

Insufficient weight loss (IWL) after bariatric surgery (BS) is a matter of debate. After gastric bypass (GBP), conversion to *distal bypass* may offer a greater malabsorptive component. After sleeve gastrectomy (SG), conversion to GBP or to Single Anastomosis Duodeno-Ileal Bypass (SADI-S) may improve weight loss and gastro-esophageal reflux disease (GERD), if present. However, increased malabsorption may lead to relevant nutritional deficiencies and intestinal transit changes. In elderly patients, risk-benefit assessment becomes even more important.

Objectives

Outcome analysis of malabsorptive surgery in elderly patients.

Methods

Between October 2019 and October 2022, 11 patients over 60 years old underwent malabsorptive BS in our hospital.

Results

Seventy-two percent of patients were women, with a mean age of 63.3 years-old (60—70). Mean preoperative BMI was 44.03 kg/m² (35.17—56.09). Six conversions from SG to distal GBP (with a 150cm common limb (CL) in 83.3% of cases), three GBP *distalizations* (150cm CL in all cases), one conversion from SG to SADI-S (250cm CL) and one primary SADI-S (300cm CL) were performed. Mean time between primary and revisional procedures was 95.7 months (17—190). Mean hospital stay was 2.36 days (2—3). There were no intraoperative complications; one patient had postoperative complications (Clavien 2). With a mean follow-up of 19.45 months (6—40), the mean BMI one year after surgery was 31.45 kg/m² (24.63—36.51), with a mean EWL% of 63.46% and TWL% of 25.81%, respectively. Patients reported a mean of 3.77 daily bowel movements (1—7), associating flatulence (45.4%) or steatorrhea (36.4%). Three patients (27.3%) are being treated with Kreon®. Despite monitored nutritional supplementation, 36.4% of patients present mild calcium/vitamin D deficiencies, 45.4% mild iron deficiency and 36.4% mild protein deficiency. Two patients present mild deficiencies of fat-soluble vitamins, one requiring vitamin A and another vitamin K supplementation. In all cases, symptoms of GERD have resolved.

Conclusion

Conversion to procedures with a greater malabsorptive component is a good option for IWL, also allowing resolution of possible associated GERD. These are safe surgical procedures in elderly patients, but they aren't free of possible long-term nutritional sequelae. Individualized multidisciplinary evaluation and treatment approaches are necessary.

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MANAGEMENT OF GASTROESOPHAGEAL REFLUX DISEASE POST BARIATRIC SURGERY USING LINX: ONE YEAR OUTCOMES

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Introduction

One of the common complications after sleeve gastrectomy (SG) is de novo reflux. Although RY gastric bypass (RYGB) has been considered the best option for patients with severe obesity and GERD, some patients still complain of persistent GERD. RYGB was the treatment of choice or management of GERD post one anastomosis gastric bypass (OAGB). New technique is to use LINX magnetic sphincter augmentation.

Methods

We reviewed the outcomes of our patients who completed at least of one year follow up using LINX post bariatric surgery including sleeve gastrectomy, one anastomosis gastric bypass and RY gastric bypass.

Results

Thirteen patients were operated (11 female and 2 male) with age of 21- 51 year. BMI was 19.1– 30 kg/m² at time of surgery. The index surgery was 9 SG, 3 RYGB (one of them was converted from SG to RYGB before she had LINX inserted) and 1 OAGB. Interval period from index bariatric surgery was 19 -52 months. GERD- HRQL score improved from 47.9 ±7.61/75 to 12.61 ±9.54/75. One patient post SG developed temporary dysphagia that improved with steroids treatment. However, she had recurrent GERD and 24h Ph study showed DeMeester score of 42.4. Another post SG patient had recurrent reflux (GERD – HRQL 27) that was confirmed by 24h Ph monitoring (DeMeester Score 24).

Conclusion

Using LINX for management of GERD post bariatric surgery is safe. It can be a tool in armamentarium of treatment of reflux after bariatric surgery specially for those with GERD and maintained low BMI after their bariatric procedures.

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MAXIMIZING WEIGHT LOSS BENEFITS OF REVISIONAL ROUX-EN-Y GASTRIC BYPASS: A PLACEBO CONTROLLED RANDOMIZED TRIAL INVESTIGATING THE ADJUNCTIVE USE OF LIRAGLUTIDE AFTER FAILED SLEEVE GASTRECTOMY

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Background

Revisional bariatric surgery is associated with less weight loss (WL) compared to primary procedures. This study aimed to investigate the efficacy of adding liraglutide, a GLP-1 analogue, to revisional Roux- en-y gastric bypass (RRYGB) for maximizing WL benefits.

Objective

To evaluate the efficacy and safety of liraglutide as an adjunctive therapy for WL in patients undergoing RRYGB after failed sleeve gastrectomy.

Methods

This single-center, randomized, double-blind, placebo-controlled trial involved 80 patients randomized evenly into liraglutide and placebo groups. The primary endpoint was WL measured by percentage of total weight loss (%TWL) and excess weight loss (%EWL), while gut hormone changes were secondary endpoints.

Results

The liraglutide group experienced better WL, with significantly higher mean %TWL and %EWL than the placebo group at one month, six weeks and six months. A %TWL of >20% at six months of treatment was seen in 15.8% of the liraglutide group and none of the placebo group. Both groups had comparable changes in fasting insulin levels, leptin, ghrelin, and PYY levels. Adverse events were recorded in 11 (27.5%) of the liraglutide group and none of the placebo group. The liraglutide group showed significantly higher resolution of associated medical conditions.

Conclusion

The adjunctive use of liraglutide with RRYGB was associated with significantly higher WL and the resolution of associated medical conditions.

O-182

MEASUREMENT OF QUALITY OF LIFE IN CLINICAL OBESITY CARE: THE S.Q.O.T. INITIATIVE

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Background

The focus of measuring success in obesity treatment is shifting from weight loss to health and quality of life (QoL). Routine assessment of QoL using patient reported outcome measures (PROMs) will ensure that the most important outcomes for patients will not go undetected. However, it is unknown which patient reported outcomes (PROs) and PROMs should be used in clinical practice.

Objectives

To select a standard set of PROs and PROMs for clinical obesity care.

Methods

The Standardizing Quality of Life in Obesity Treatment (S.Q.O.T.) III face-to-face hybrid consensus meeting including people living with obesity (PLWO) was held in Amsterdam, the Netherlands, 2022. This consensus meeting was preceded by two prior multinational consensus meetings and a systematic review. The meeting was led by an independent moderator specialized in the development of PROs and PROMs.

Results

The S.Q.O.T. III consensus meeting was attended by 27 participants representing twelve countries across five continents. The participants included experts (surgeons, endocrinologists, dieticians, psychologists, researchers) and PLWO who were mostly involved in patient representative networks. The following PROMs were selected to measure eight previously selected PROs: IWQOL-Lite (self-esteem), BODY-Q (physical function, physical symptoms, psychological function, social function, eating behavior and body image), QOLOS (excess skin) and no PROM (stigma). The PLWO were not concerned about the time it would cost to fill out these questionnaires routinely and found all PROs important.

Conclusion

A standard set of PROs and PROMs to measure QoL in clinical obesity care for has been selected, incorporating patients' and experts' opinions. This standard set should be used as a minimum to measure QoL in routine clinical practice. It is essential that individual PROM scores are shared with PLWO to enhance patient engagement and shared decision-making.

O-183

META-ANALYSIS OF LONG-TERM DE NOVO ACID REFLUX RELATED OUTCOMES FOLLOWING SLEEVE GASTRECTOMY: ROUTINE POST-OPERATIVE ENDOSCOPIC SURVEILLANCE IS UNNECESSARY

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Objectives

To evaluate the incidence of long-term de novo acid reflux related complications following sleeve gastrectomy (SG) to determine whether routine postoperative surveillance endoscopy is necessary.

Methods

A systematic search of MEDLINE, EMBASE, CINAHL, CENTRAL, and Web of Science and bibliographic reference lists was conducted. Proportion meta-analysis model was constructed to quantify the risk of the de novo gastro-oesophageal reflux disease (GORD), oesophagitis and Barrett's oesophagus (BE) at least four years after SG. Random-effects modelling was applied to calculate pooled outcome data.

Results

Thirty-two observational studies were included reporting a total of 7904 patients who underwent primary SG and were followed-up for at least 4 years. The median follow-up period was 60 months (48-132). Preoperative acid-reflux symptoms existed in 19.1%±15.1% of the patients. The risk of development of de novo GORD, Oesophagitis, and BE after SG were 24.8% (95% CI 18.6%-31.0%), 27.9% (95% CI 17.7%-38.1%), and 6.7% (95% CI 3.7%-9.7%), respectively. The between-study heterogeneity was significant in all outcome syntheses. It was estimated that 65% of the included studies have not reported BE and oesophagitis solely because they have never happened in their cohorts.

Conclusions

Long-term risk of de novo GORD after SG is comparable with those of general population which questions the merit of surveillance endoscopy after SG in asymptomatic patients. Underreporting of the “non-occurrence” of BE and oesophagitis by most of the available studies has led to unrealistically high rates of both outcomes after SG in any evidence synthesis. Endoscopic surveillance is unnecessary and may be warranted only in symptomatic patients.

O-184

METABOLIC SYNDROME REMISION, FIVE YEARS AFTER SLEEVE GASTRECTOMY VRS ONE ANASTOMOSIS GASTRIC BYPASS FOR LOW BMI PATIENTS

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Introduction

There is need of information about result with restrictive procedures as One Anastomosis Gastric Bypass (OAGB) in low BMI patients with Metabolic Syndrome. Since 1995 the metabolic effect of mal absorption procedures as Roux in Y Gastric Bypass (RYGB) have been published, and different grades of remission of Diabetes Mellitus is already described without even begin weight loss. Therefore the effect of procedures despite weight loss needs to be further described in order to safely offer Bariatric and metabolic surgery to normal weight patients of only with overweight (BMI 25-30)

Objectives

Compare the results of One Anastomosis Gastric Bypass with Sleeve gastrectomy procedures in patients with 25-30kg/m² of BMI that have being diagnosed with Metabolic Syndrome.

Methods

We prospectively evaluated the respective parameters in patients diagnosed with MS that underwent either SG (n=21) or OAGB (n=23). All patients where selected by criteria of Metabolic Syndrome diagnosed by multidisciplinary team. (NCTPIII Criteria)

Results

All the patients achieved Diabetes remission (HbA1C < 6.5%) without medical treatment. after one year. Initial HbA1c was 9.15% for SG and 10.13% in OAGB, and final after one year was 6.15% and 5.95% respectively. The OAGB achieved remission in a shorter period of time. Main final triglycerids after one year had no stadistical difference in both groups. And Main final HDL level was grater in OAGB group. Two patients(N=20%) of OAGB group presented with treatable anemia. One patient of SG group returned to Hypertension medical treatment. No patient presented malnutrition or underweight. At 5 yearas results of remission are showened in Table 1.

	SG	OAGB/BAGUA
COMPLETE	n 21(84%)	n 23(78%)
PROLONGED	n 16(56%)	n 20(71%)
PARTIAL	n 23(92%)	n 25(89%)
IMPROVEMENT	n 8(32%)	n 8(28%)
No remission	n 0%	n 1(3%)

Conclusion

Bariatric procedure as SG and OAGB can be safely performed in patients ≤ 30 BMI and improve MS. Further data and time analysis is needed to stablish safety for low BMI patients. There was now statistical difference for MS remission with SG or OAGB in low BMI patients.

O-185

METABOLIC-BARIATRIC SURGERY REDUCES BREAST CANCER RISK IN PREMENOPAUSAL AND POSTMENOPAUSAL WOMEN

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Background

The association of BMI with breast cancer has been reported to differ by menopausal status, with BMI being positively associated with postmenopausal breast cancer but inversely with premenopausal status.

Objective

This study explored whether bariatric surgery results in increased risk for premenopausal breast cancer.

Methods

This retrospective study with follow-up from 1982 through 2019, matched 21,837 bariatric surgical patients (surgeries from 1982 to 2018) one-to-one with non-surgical subjects by age, sex, and pre-surgery BMI. Primary outcomes included cancer incidence for premenopausal and postmenopausal breast cancer. Adjusted hazard ratios (HR) and 95% confidence intervals (CI) were estimated using multivariable Cox proportional hazard regression models. Post-menopausal breast cancer was defined by age ≥ 55 years at diagnosis.

Results

The incidence rates for premenopausal breast cancer were 0.6 (n=123) and 0.7 (n=157) for surgery and non-surgery subjects, respectively, and the incidence rates for postmenopausal breast cancer were 1.1 (n=249) and 1.4 (n=302) for surgery and non-surgery subjects, respectively. Compared with non-surgical subjects, patients undergoing surgical weight loss had a 21% lower incidence of postmenopausal breast cancer (HR 0.79; 95% CI 0.64 to 0.97; p=0.025) and a 28% lower incidence of premenopausal breast cancer (HR 0.72; 95% CI 0.54 to 0.95; p=0.022).

Conclusions

Bariatric surgery was associated with lower postmenopausal and premenopausal breast cancer incidence. These results are of clinical importance since weight loss in females with severe obesity may beneficially lower incidence for both postmenopausal and premenopausal breast cancer.

O-186
MGB/OAGB IN ADOLESCENTS – LONG TERM FOLLOW UP

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Objective

We are aiming to provide a long-term weight loss and comorbidity resolution data of MGB/OAGB in adolescents who underwent laparoscopic MGB/OAGB.

Methods

A cohort study of the data of 57 adolescent patients, who underwent Laparoscopic MGB/OAGB at our institute, from 2013 till 2017.

Results

A total of 57 adolescents were enrolled in the adolescents study. Of the 57, 46(80%) were females and 11(19.3) males, with mean age of 16.5±1.4 and the minimum age was 13 with an age limit by 21 according to the definition for adolescence. Regarding the years of follow up 3(5.3) were followed for 9 years ,6 (10%) for 8 years, 17 (29.8) for 7 years, 14 (24.6) for 6 years and 17 (29.8)for 5 years. Results of excess weight loss showed that 83% of mean excess weight loss was maintained at 4 years and reached 73% between 5-9 years of surgery which was comparable to adult studies.

Conclusion

Laparoscopic MGB/OAGB is maybe a safe and an effective procedure in morbidly obese adolescents on long term follow up.

O-187

MORBIDITY-MORTALITY AT 30 DAYS OF THE NISSEN SLEEVE. NATIONAL MULTICENTER STUDY

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Introduction

Currently the sleeve gastrectomy (SG) is the most practiced procedure in bariatric surgery in the world, more than 50%. The problem posed is the risk of postoperative reflux: 30 to 57% at 5 years. The Nissen-Sleeve Gastrectomy (Nissen-SG), is an innovative technique practiced. It consists of the creation of a total anti-reflux fundoplication (Nissen) before performing an SG. The objective of this study is to study the morbidity and mortality at 30 days of this intervention performed by centers with expertise having been trained by one or more experts.

Methods

Data from patients operated on by Nissen-SG between 2021 and 2023 have been collected. The following elements were collected: age, sex and BMI. Complications were reported according to the Dindo-Clavien classification within 30 postoperative days. Weight loss at one month was reported. All patients signed informed consent. The protocol has been approved by the Nantes Ethics Group in the field of health (AVIS 22-01-281).

Results

Eighty-one patients with 71 women (88.8%) were included in the study. The mean age of the patients at the first surgery was 37.0 ± 11.14 years and the mean BMI was 41.3 ± 3.79 kg/m². Intraoperatively, 79 N-Sleeves were performed (one intraoperative resection of the valve for vascularization defect and the second presence of a diverticulum at the level of the greater curvature). The operating time was 83.5 ± 19.86 min. The complication rate was 13.58%. Mortality was 0%. According to Clavien and Dindo, there were 2 Grade 2 complications: ischemia of the spleen; 7 Grade 3 complications: 1 valve dilation, 1 valve stenosis, 1 twist under valve, 1 staple line bleeding, 1 valve necrosis, 2 endoscopy valve dilations and 2 Grade 4 complications with valve perforation. At one month postoperative, the BMI was 31.27 ± 3.76 kg/m². One patient had reflux and 11 patients had dysphagia.

Conclusion

The results show a complication rate of more than 10% without mortality. In view of the morbidity, this procedure should be reserved for expert centers. The long-term results, in particular on reflux and weight loss, are in progress.

O-188
MORE LENGTH, MORE GAIN: A PROSPECTIVE ANALYSIS OF 150 PATIENTS WITH A BILIOPANCREATIC LIMB LENGTH OF 200 CM AND AN ALIMENTARY LIMB LENGTH OF 75 CM IN ROUX-EN-Y GASTRIC BYPASS (RYGB)

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Introduction

Roux-en-Y gastric bypass (RYGB) is arguably one of the best and time-tested procedures for the treatment of morbid obesity and its associated comorbidities such as diabetes mellitus, hypertension, hypercholesterolemia, obstructive sleep apnea, osteoarthritis, and GERD, to name a few. Some studies on RYGB (and OAGB) have previously shown better weight loss and resolution of comorbidities by increasing the biliopancreatic limb length in patients with morbid obesity.

Objective

To demonstrate that a longer biliopancreatic limb length results in more weight loss and better resolution of associated comorbidities at 6 months, 1 year, and 2 years.

1. Primary outcome:
 - A. Percent total body weight loss (%TWL) and percent excess weight loss (%EWL) at 6 months, 1 year, and 2 years follow-up.
 - B. Remission of T2DM, hypertension and dyslipidemia.
2. Secondary outcome:
 - A. Postoperative complications (early, intermediate, and late).
 - B. Nutritional deficiencies.
 - C. Steatorrhea.

Methodology

After an IRB approval, a prospective cohort study of 150 patients, operated on at a single center (between 2010 to 2022), that were obese and underwent laparoscopic RYGB (200 cm biliopancreatic limb length) have been included. Demographic data and metabolic profiles of these patients were collected preoperatively and at 6 months, 1 year, and 2 years postoperatively.

Results

150 patients were reviewed. The follow-up rate was 85%. Almost all data was homogenous at baseline. M/F ratio was 1/3. % TWL, % EWL, FBS, HbA1C, total cholesterol, S. triglycerides, remission of hypertension was measured. The early and delayed complications were recorded.

Conclusions

In conclusion, RYGB with long biliopancreatic limb length (200 cm) and short alimentary limb length (75 cm) is a relatively safe and effective surgery in Indian patients with obesity, achieving adequate weight loss with good remission of comorbidities at 2 years in the majority of patients. The risk of steatorrhea and protein energy malnutrition was found to increase, if nutritional supplementation was not followed adequately in the postoperative period.

O-189

MULTICENTRIC INTERNATIONAL STUDY TO EVALUATE PERFORMANCE AND SAFETY OF LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING (HELIOGAST)

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Introduction

Many surgical techniques are routinely used in patients with severe obesity (BMI > 35). Laparoscopic adjustable gastric banding (LAGB) is the unique truly reversible surgical option effective on severe and morbid obesity. The objective is to measure LAGB efficacy and tolerance in current practice. Primary objective of the study was to measure the effectiveness of LAGB (Heliogast®) at 12 and 24 months by excess weight loss (EWL) measurement. Secondary objective was to assess the safety of the band by measuring incidence of early (< 30 days) and late (> 30 days) complications observed on the band and the implantable chamber, as well as the rate of reintervention.

Methods

From January 2019 to December 2022 1195 patient were enrolled (M/F ratio 131/1064), mean age was 41.8 yrs, mean BMI 38.1.

Results

To date out of 1195 patients enrolled 805 (67%) have completed 12 months and 527 (44%) 24 months of follow up, respectively. The success criterion of an EWL > 60% after 1 year and > 50% at 2 years of treatment was achieved in 76% of patients, while 98.7 of patients achieved EWL >25% at 2 years. There were no deaths, no band erosion/intraluminal migration. Complications were the followings: 6 band slippages (0.5%) underwent repositioning (3) or removal (3).

Conclusion

This study carried out in a multicenter series of patients for their treatment with the Heliogast® adjustable gastric band allowed us to establish the following observations:

- More than 98% of patients kept their band implanted with satisfaction up to 24 months, side effects are mild and transient (vomiting and epigastric pain);
- Fast and easy procedure for implantation of the band and the implantable port;
- Gastric band easily unlocked and retained when resolving slippage or removal.

Efficacy is in line with other bariatric procedures, double-balloon of the HAGA reference allows a low pressure on the stomach wall.

O-190
NALTREXONE/BUPROPRION, LIRAGLUTIDE OR SEMAGLUTIDE AS ADJUVANT THERAPY AFTER BARIATRIC-METABOLIC SURGERY

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Background

Weight regain, inadequate weight loss or weight loss plateau after bariatric-metabolic surgery is not uncommon. Other than life style modification or revisional/conversional surgery fewer adjuvant therapies exist. Anti-obesity medications to prevent and manage excess weight after bariatric-metabolic surgery are now being recommended.

Objectives

To determine the efficacy of anti-obesity medications following weight regain, inadequate weight loss or weight plateau following bariatric-metabolic surgery.

Methods

Retrospective analysis of a prospectively collected data base of patients prescribed anti-obesity medications (naltrexone/bupropion, liraglutide or semaglutide) following adjustable gastric banding (LAGB), sleeve gastrectomy (LSG) or one anastomosis gastric bypass (OAGB). Data are reported as categorical values using either parametric or non-parametric statistics.

Results

135 patients were available for analysis: 92% female, 8% male with a mean (+/-SD) baseline weight and BMI of 98.9±27.4kg, 35 ±7.7 kg/m², respectively. There were 37 patients following LAGB, 79 following LSG and 19 following OAGB. Patients regained an average of 9.2kg +/- 7.8kg, which represented 29% of the initial weight loss following bariatric-metabolic surgery. 52 patients received either naltrexone/bupropion (8/90mg to 32/360mg po daily), 28 liraglutide (1.2 to 3.0mg s/c daily), or 55 semaglutide (0.5 to 1.0mg s/c weekly) between 3.1 – 4.5yrs (95% CI) post bariatric/metabolic surgery. The median duration of adjuvant drug treatment was 10 months (4.0-13.5mths; 25th -75th percentile). This was associated with a median TBWL% of 8.9% (1.9-13.7%; 25th -75th percentile). 61.1% had lost >5% TBWL, 32.2% >10% TBWL, 22.2% > 15% TWBL and 6.7% > 20% TBWL. Adverse side effects were minor and reflected clinical trial non-surgical cohorts.

Conclusion

Anti-obesity medications confer additional significant weight loss in patients with weight regain, inadequate weight loss or weight plateau and should be considered as part of bariatric-metabolic surgery after care.

O-191

N-HEXYL CYANOACRYLATE FOR THE CLOSURE OF MESENTERIC DEFECTS DURING ROUX-EN-Y GASTRIC BYPASS

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Background

Closure of mesenteric defects after Roux-en-Y gastric bypass (RYGB) is recommended to reduce internal hernia (IH) occurrence and complications. However, the optimal technique of closure remains to be determined. Here, we report the feasibility and safety of n-hexyl cyanoacrylate glue (IFABOND®) in real-world clinical practice.

Methods

All patients who underwent RYGB with closure of mesenteric defects using IFABOND® glue at the Nancy Regional University Hospital, France, from February 2018 to March 2021, were included in the analysis. Mortality and morbidity (Clavien-Dindo score ≥ 3) were collected at 1, 6, 12, and 24 months after RYGB.

Results

426 patients (78.2% women) were included. On average, they were 44 ± 11 (mean \pm SD) years old and had a body mass index of 44.1 ± 5.4 kg/m². All patients were followed-up at 1 and 6 months, 97,6 % at 12 months and 90,8% at 24 months. The mortality was 0%. The morbidity was 1.9% at 1 month and 1.4% at 6 months, 4,4% at 12 months and 2,6% at 24 months. None of the complications involved the glued zone and no internal hernia were reported. No small bowel obstructed was relayed.

Conclusion

The closure of mesenteric defects during RYGP using n-hexyl cyanoacrylate glue is a feasible and safe procedure to be used in routine clinical practice.

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NOVEL TECHNIQUE FOR PREVENTION OF INTERNAL HERNIA AFTER LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS

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Background

Laparoscopic Roux-en-Y gastric bypass (LRYGB) is still the gold standard operation for bariatric surgery. Internal hernia through the newly formed mesenteric defects remains one of the most dreadful complications that if not managed timely, can result in bowel ischemia. Many studies investigated the classic methods of closure of these defects including suture closure or with stapler. Here we present closure using cyanoacrylate glue as a safer, quicker and easier approach with excellent outcome for closure of the mesenteric defects and prevention of internal hernia.

Methods

This is a retrospective analysis of prospectively collected data of 263 patients with morbid obesity who underwent LRYGB. Patients were followed up to 9 years. Operative data, length of hospital stay, incidence of postoperative internal hernia and other complications, mean postoperative BMI, resolution of co-morbidities were recorded and evaluated.

Outcome

This study included 165 females and 98 males with a mean age of 51.9 years. The operations varied between primary LRYGB to revision procedures (10.6%). Also, it included LRYGB for gastroparesis. Mean preoperative BMI was 44.26 kg/m². The median operative time was 73 (58 – 131) minutes. The median hospital stay was 1 (1 -3) days. The reduction in postoperative BMI and excess weight loss was recorded during the follow-up period. Also, post-operative complications (other than internal hernia) and resolution of comorbidities were analyzed. The cost of the cyanoacrylate glue is calculated. Kaplan-Meier curve was used to estimate the survival the disease-free interval. There was no single case of internal hernia in our series with a rate of 0%. A picture of defects closed by cyanoacrylate glue after one year is attached.

Conclusion

This is the first study to evaluate the use cyanoacrylate glue in the closure of mesenteric defects. Our results suggest that cyanoacrylate glue is a safe and effective tool in the closure of the mesenteric defects after LRYGB to prevent internal hernia. It is a simple method that almost doesn't increase the operative time and can be standardized and replicated easily with-out much difficulty, however, this comes at a higher financial cost. Further randomized prospective study is suggested to reinforce the results.

O-193

NOVICE CHINESE BARIATRIC NURSES' PERCEPTIONS OF THEIR ROLE AS BARIATRIC CASE MANAGERS: A QUALITATIVE STUDY

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Introduction

Bariatric nurses are integral members of the healthcare team for patients undergoing bariatric surgery. As the demand for bariatric surgery increases in China, the number of bariatric nurses has also risen. However, little is known about the perceptions of novice bariatric nurses towards their role as bariatric case managers. The purpose of this study is to investigate the perceptions of novice Chinese bariatric nurses towards their role during the early stages of their careers.

Methods

This qualitative study employed semi-structured individual interviews with six novice bariatric nurses who received job training. The interviews were voice-recorded, transcribed line-by-line, and analyzed thematically. The study was conducted in the bariatric surgery units of a publicly funded hospital in Southern China.

Results

Three primary themes emerged from the data related to the perceptions of being a bariatric nurse: “bearing unexpectedly multiple responsibilities”, “requiring versatile skills and personal attributes” and “a busy, lonely but meaningful journey”. The novice bariatric nurses expressed both positive and negative feelings towards their role. They highlighted the need for further training to improve their qualifications and the importance of support from peers and colleagues.

Conclusion

The findings of this study shed light on the demanding requirements of being a bariatric nurse in China and the need for more support from peers and colleagues. Future research should investigate effective and acceptable cooperation modes between bariatric nurses and other medical care providers. The results of this study may inform the development of training programs for novice bariatric nurses and improve their capacity to provide quality care to patients undergoing bariatric surgery.

O-194
OBESITY AND DIABETES ARE ASSOCIATED WITH HIGHER MORTALITY IN PATIENTS WITH COVID-19

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Background

The prevalence of increased BMI in the general patient population was noted during the COVID–19 pandemics. The effects of BMI on a variety of different clinical outcomes and its association with patients who underwent prior bariatric-metabolic surgery remains to be adequately studied.

Objectives

The primary objective of this study was to evaluate COVID – 19 patients and the correlation of patient's outcomes based on the evaluated risk factors: gender, age, BMI, prior bariatric-metabolic surgery, and presence of diabetes mellitus (DM). The outcomes analyzed were mortality, need for ICU admission, intubation rate, and presence of diabetes mellitus.

Methods

A retrospective review of all covid-19 patients was preformed between March 2019-June 2020. The variables analyzed were gender, age, BMI, prior bariatric-metabolic surgery, and presence of diabetes mellitus (DM). The clinical outcomes of interest included mortality, intubation rate, need for ICU admission, and length of hospital stay (LOS). Patients were divided into four groups based on BMI: Underweight to Normal – BMI less than 25, Overweight - BMI 25-29.9, Obesity 1 - BMI 30-34.9, and Obesity 2+ - BMI 35+. Each of the endpoints (Mortality, ICU admission, Intubation, and LOS) were individually analyzed for each BMI category.

Results

A total of 1412 patient charts were reviewed. It was seen that mortality was significantly related with diabetes ($p<0.001$), gender ($p=0.007$), and BMI ($p=0.0154$). Intubation was significantly related with diabetes ($p=0.001$), gender ($p<0.001$) and BMI ($p=0.00768$). ICU admission was significantly related with diabetes ($p<0.001$), and gender ($p<0.001$). LOS was significantly related with Diabetes ($p<0.001$), and gender ($p<0.001$).

Conclusion

BMI, diabetes, and gender was significantly correlated to mortality and intubation rates, where as diabetes and gender was also significantly correlated with LOS and ICU admission.

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OBESITY, BARIATRIC SURGERY, AND INFLAMMATORY BOWEL DISEASE: A SCOPING REVIEW OF THE MYSTIFYING RELATIONSHIP

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Background

A considerable percentage of inflammatory bowel disease patients have obesity. Bariatric surgery is increasingly used for severe obesity. However, data is scarce on the complex relationship between obesity, inflammatory bowel disease and bariatric surgery.

Objectives

Examine the impact of bariatric surgery on patients with pre-existing inflammatory bowel disease and describe the risk of de-novo inflammatory bowel disease development post-bariatric surgery.

Methods

A scoping review following the PRISMA Extension for Scoping Reviews guidelines was conducted. Search involved five databases, from inception till 10th November 2022.

Results

The search identified 595 studies. Finally, 40 studies were selected for final analysis: 24 involved bariatric surgery in patients with inflammatory bowel disease and 16 addressed development of de-novo inflammatory bowel disease post-surgery. For patients with pre-existing inflammatory bowel disease, mean pre-operative BMI was 44.8 kg/m². In total, 56.8% patients had Crohn's disease whilst 43.1% had ulcerative colitis. Bariatric procedures included sleeve gastrectomy (54.6%), Roux-en-Y gastric bypass (30.2%) and gastric banding (14.1%). Excess weight loss % post-surgery ranged from 35.4%-86.1%. Altogether, 334 complications were reported in 1721 patients (22 studies): commonest being strictures, small bowel obstruction and bleeding. Majority authors concluded bariatric surgery is both effective and safe for inflammatory bowel disease patients. However, only few studies had reported on the clinical course of inflammatory bowel disease post. No death was directly linked to surgery. On average, de-novo inflammatory bowel disease was diagnosed 46.1 months post-surgery: 54.2% developed Crohn's disease, 39.5% ulcerative colitis, while 6.3% were inflammatory bowel disease-unclassified. The most common bariatric surgeries were Roux-en-Y gastric bypass (88.8%), followed by sleeve gastrectomy (6.2%) and gastric banding (2.3%).

Conclusion

Bariatric surgery is effective and safe for inflammatory bowel disease patients, contributing to substantial weight loss, without added morbidity and mortality. However, there have been reports of inflammatory bowel disease development after bariatric surgery. Nevertheless, this risk is considered small; the positive effect of bariatric surgery outweighs these findings. Prospective studies to understand the above associations & potential mechanisms are needed. This scoping review also revealed limited evidence on the clinical course of inflammatory bowel disease post-surgery, thus, more research is needed.

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ONE ANASTOMOSIS GASTRIC BYPASS (OAGB) AND BILIARY REFLUX: FREQUENCY AND THERAPEUTIC OPTIONS AFTER 2713 PRIMARY PROCEDURES

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Background

In recent years, one-anastomosis gastric bypass (OAGB) has become an established procedure in the surgical treatment of people with obesity and shows results that are just as good as the Roux-Y gastric bypass in terms of long-term weight loss and improvement of obesity-associated comorbidities. Biliary reflux is a long-term complication of OAGB. In addition to restricted quality of life, it is feared that chronic biliary reflux promotes development of gastric or esophageal carcinomas.

Objectives

Frequency of clinically relevant biliary reflux after OAGB and its conservative and surgical therapeutic options and their effectiveness.

Methods

Retrospective evaluation of 2713 patients with obesity who underwent OAGB as primary surgery at Obesity Clinic at Schoen Clinic Hamburg Eilbek (Germany) between September 2016 and September 2022. Evaluation of the frequency of clinically relevant biliary reflux, which led to surgical revision with conversion of the OAGB into a Roux-Y-situation after conservative therapy options had been exhausted.

Results

In the follow-up period up to December 2022, a total of 74 patients (2.72%) were converted into Roux-Y gastric bypass because of refractory biliary reflux. In 63 patients, biliary reflux was predominant and the biliary loop was distalized. In addition, 11 patients had a chronic anastomotic ulcer, which led to a resection of the gastro-jejunostomy and a new anastomosis was performed simultaneously. Postoperative early complications (< 30 days) occurred in one patient (1,35%) with hematemesis, two patients (2.7%) with bleeding at the side of the jejuno-jejunostomy which required a laparoscopic revision and two patients (2.7%) with abdominal wall hematoma. Late complications observed: persistent reflux symptoms n=2 (2.7%), dumping syndrome n=1 (1.35%) and recurrence of anastomotic ulcer n=4 (5.4%).

Conclusion

Biliary reflux is a typical but rare long-term complication after OAGB. If conservative therapy attempts fail in the long term and the level of suffering is high, conversion into a Roux-Y- situation is a successful treatment option with low complication rates and high patient satisfaction.

O-197

ONE ANASTOMOSIS GASTRIC BYPASS WITH A 150 CM BILIOPANCREATIC LIMB: WEIGHT LOSS AND SERIOUS ADVERSE EVENTS

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Introduction

In 2019, the Haute Autorité de Santé in France evaluated the safety and efficacy of one anastomosis gastric bypass (OAGB) with a 200 cm biliopancreatic limb based on the results of published prospective randomized studies, particularly the YOMEGA study, which identified concerning nutritional risks at 2 years, resulting in the termination of health insurance coverage. An alternate treatment with a 150 cm biliopancreatic limb has been offered as safer, although there is insufficient long-term evidence in the literature. The goal of our study is to assess the occurrence of serious adverse events (SAE) in the ten years following surgery.

Methods

This is an observational, prospective, multicenter research (NCT04930029) that included a representative sample of 163 patients (10% of the overall cohort) who were randomly selected among patients who received 150 cm biliopancreatic limb OAGB at two high-volume expert centers between 2008 and 2013. We collected preoperative data and serious adverse events associated to OAGB retrospectively and prospectively at 10, clinical, biological, and morphological data.

Results

At 10 years, there had been 51.5% follow-up. Mean total weight loss was 27.9±12.2%. At the nadir, BMI was below 25 kg/m² in 61.4% of patients. The number of comorbidities decreased statistically significantly (diabetes and sleep apnea syndrome). In intention to treat, at least one SAE was reported in 54.8% of patients: mainly cholecystectomy (n=13, 15.5%); perioperative complication (n=5, 6.0%); revision surgery for occlusion (n=2, 2.3%) chronic pain (n=5, 5.9%) or abdominal eventration (n=2, 2.4%), ulcer (n=6, 7.1%) or anastomotic stenosis (n=1, 1.2%), renal lithiasis (n=5, 6.0%) . Supplemental intravenous iron was needed by 25.0% of the patients. At ten years, 28.6% of patients reported to have reflux every day. Five patients (6%) underwent conversion from OAGB to roux en Y gastric bypass for intractable reflux.

Conclusion

The OAGB with a 150 cm biliopancreatic limb allows for a significant and sustained weight reduction, which can result in malnutrition and necessitate long-term follow-up in an expert center.

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ONE-ANASTOMOSIS GASTRIC BYPASS (OAGB) VS SINGLE ANASTOMOSIS DUODENO-ILEAL BYPASS (SADI) AS REVISIONAL PROCEDURE FOLLOWING SLEEVE GASTRECTOMY: RESULTS OF A MULTICENTER STUDY

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Introduction

Sleeve gastrectomy (SG) is the most commonly performed bariatric procedure, but a discrete number of patients may require revisional procedure because of inadequate weight loss / weight regain (IWL/WR) and/or complications. Conversion options include One Anastomosis Gastric Bypass (OAGB), Roux-en-Y Gastric Bypass (RYGB), Duodenal Switch (DS), and Single Anastomosis Duodeno-Ileal bypass (SADI).

Objectives

The aim of this study was to compare the outcomes of revisional OAGB Vs SADI following SG.

Methods

All patients who underwent OAGB or SADI as a revisional procedures for IWL/WR at three high-volume bariatric Centers between January 2014 and May 2022 were included. Patients were matched with Propensity Score Matching (PSM) to overcome selection bias as for age, sex, BMI and comorbidities. Demographic, clinical, operative and postoperative. Postoperative outcome measures of the two groups of patients were compared.

Results

One hundred and sixty-eight patients were identified: 126 underwent OAGB and 42 SADI. After PSM, the two groups consisted of: 42 OAGB and 42 SADI. Median post-operative hospital stay was longer following OAGB group compared to SADI group (4 days Vs 2, $p=0.001$). Need for post-operative ICU admission was higher in OAGB group compared to SADI. Early (≤ 30 days) post-operative complications rate did not differ significantly between OAGB and SADI groups (3 bleedings Vs 0, respectively, $p=0.241$). Later (>30 days) complications rate was significantly higher in the OAGB group: they included 2Vs0 anastomotic ulcer, 2Vs0 anastomotic stenosis, 1Vs1 small bowel twisting, 1Vs0 internal hernia, 1Vs0 GERD, 1Vs0 malnutrition, 1Vs0 WR ($p=0.007$). Seven OAGB patients needed to be converted to another procedure (Roux-en-Y gastric bypass) because of complications Vs none among the SADI patients ($p=0.006$). At the 2-year follow-up %EWL was significantly higher in the SADI group ($p=0.003$).

Conclusions

SADI and OAGB are both effective as revisional procedures for IWL/WR after SG. OAGB is associated with a higher rate of late complications (>30 days) and a not negligible rate of conversion (RYGB) because of complications. Larger studies are necessary to draw definitive conclusions.

O-199

ONE-ANASTOMOSIS GASTRIC BYPASS (OAGB) WITH TAILORED BILIOPANCREATIC LIMB LENGTH VERSUS FIXED BPL LENGTH: FIVE YEARS OF FOLLOW-UP RESULTS

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Background

OAGB is a bariatric procedure that confers satisfactory weight loss and improvement of comorbidities. The ideal length of the biliopancreatic limb (BPL) is still to be determined. Whether to perform a fixed length BPL or a tailored one needs to be investigated.

Objective

The aim of this study was to investigate if a tailored biliopancreatic limb (BPL) length is superior to a fixed BPL length of 200 cm in terms of p.o. weight loss results and nutritional deficiencies in people with severe obesity 1, 3 and 5 years following OAGB.

Methods

Sixty-four patients who underwent OAGB were divided into two groups depending on the BPL length used: fixed 200-cm BPL (Group A) and tailored BPL group (Group B). Anthropometric measurements (BMI, %EWL, TWL, %TWL) and nutritional parameters (vitamin A, vitamin D₃, vitamin B₁₂, serum iron, serum albumin, total protein) were compared between the two groups at 1-year, 3 years and 5 years follow-up.

Results

No statistically significant differences were observed between the two groups in terms of %EWL, TWL, %TWL after one year. At three years and five years follow-up, patients in Group A showed more weight regain compared with patients within group B. The number of patients with deficiencies of vitamin A ($p = 0.030$), vitamin D₃ ($p = 0.020$), and albumin ($p = 0.030$) was significantly higher in fixed 200-cm BPL than in tailored BPL group, 1 year following OAGB. No statistically significant differences were seen between the patients in two groups in terms of vitamin B₁₂, iron, and total protein deficiencies. The trend was the same at three and five years follow up for both groups.

Conclusion

Our study showed that a tailored BPL length is associated with less nutritional deficiencies while providing similar weight loss when compared to the fixed 200-cm. Furthermore, it provides a lower percentage of weight regain at 3 and 5 years after surgery. Tailoring BPL length by bypassing about 40% of the SBL seems to be safe and effective. Further studies with larger sample sizes and longer follow-up periods are needed to confirm our results.

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ONE-ANASTOMOSIS GASTRIC BYPASS, IS IT BETTER TO MEASURE BLIOPANCREATIC OR COMMON LIMB? PRELIMINARY EXPERIENCE IN PATIENTS WITH SUPEROBESITY

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Introduction

Conventional one anastomosis gastric bypass (OAGB) has become increasingly common procedure since 2001. It is considered an efficacy procedure in obese and superobese patients, however, some patients experience malabsorbiment and excessive weight loss. Single-anastomosis gastroileal bypass (SAGI) with 300-cm common limb could be considered a “controlled” ipo/malabsorbitive procedure tailored for superobese patients or high metabolic patients. This study aimed to assess SAGI procedure designed to evaluate its safety and feasibility, furthermore it could be an alternative to avoid some of the drawbacks of OAGB.

Material and Methods

Patients with BMI>50kg/m underwent SAGI (group 1) or OAGB (group2) from January 2022 to October 2022 at Obesity Surgery Unit, ARNAS Brotzu Cagliari. Perioperative complications, operative time, hospital stay and re-hospitalization and EWL%, nutritional complication at six month follow-up were analyzed.

Results

31 patients were evaluated (group 1, 13 patients; group 2 18 patients). Mean BMI was 56.2kg/m² (BMI 56.6 group 1 and 55.8 group 2). Mean age was 47.1years (45.3 group 1 and 48.4 group 2). 7/31 patients presented diabetes, 15/31 hypertension and 15/31 OSA. Mean operative time was 93 min for group 1 and 91.1 min for group 2. Complication, i.e. bleeding, occurred in 2 patient in each group and 1 patient in group 1 required transfusion. Mean postoperative hospital stay was 2,2 days for group 1 and 2,4 for group 2 (5 patient stay more than 2 days, 1 in group 1 and 4 in group 2). 24 patients have a six months follow-up. Mean TWL was 49.9kg group 1 and 50.2kg; mean EWL% was higher in group 2 (p=0.06; 49%, group1, 58% group 2); mean EBML% was higher in group 2 (p=0.06; 54.3% group1 and 63.6% group 2). Mean BMI was lower in group 2 (p=0.07 ; 40.1kg/m² group1, 36.2kg/m² group2). 7 patients have nutritional deficiencies: 1 patients presented anemia in group 2, 1 patients presented iposideremia in group 1, 2 patients in group 1 presented vitamin D deficiency and 1 patient in group 2.

Conclusions

SAGI could be a safe alternative than conventional OAGB, this preliminary data shows that OAGB seems to have more efficacy than SAGI.

O-201

ONE-ANASTOMOSIS TRANSIT BIPARTITION (OATB): MID-TERM RESULTS

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Background

The “One-anastomosis transit bipartition” (OATB) is a promising emerging technique in the metabolic syndrome control, with the potential for a low rate of nutritional complications while maintaining endoscopic access to the entire upper digestive tract. Although there is robust evidence regarding body weight reduction and DM2 remission, the results need to be confirmed in the medium and long term.

Objectives

Evaluation of the surgical, clinic and nutritional aspects of patients undergoing OATB.

Methods

Cross-sectional and retrospective study, carried out with individuals undergoing primary OATB between May 2015 and July 2022. The following were included: ≥ 18 years old, grade \geq II obesity; excluding smoking habits, drug addictions, inflammatory bowel diseases. The data obtained: demographic, anthropometric, length of the gastro ileal loop, associated procedures, surgical and hospitalization time, reduction in %TWL, evolution of comorbidities, nutritional deficits, morbimortality.

Results

68 participants, 75.7% women, mean age 45.6 years and BMI 40.9 kg/m². All underwent laparoscopy, no conversions. Comorbidities: OSAS (51.4%), arthralgias (52.8%), HTA (45.7%), T2DM (41.4%), dyslipidemia, depression and GERD in lower rates. Mean operative time 122.6 min (65 – 280 min), 40 associated procedures and hospital stay of 2.2 days (1 – 8 days). Length of the gastro-ileal loop, 28 patients - 300cm and 40 - 250cm. There were postoperative complications, early 2.8%, late 8.6%. Reoperations 7,1%, no mortality. Weight evolution at 60 months (%TWL) 34.1%; remission of comorbidities: 93.3% T2DM; 91.7% OSAS; 86.4% GERD; 80.8% dyslipidemia; 78.4% arthralgias and 71% HTA. The incidence of nutritional disorders at any time during follow-up: hypovitaminosis D (14.3%), folate hypovitaminosis (11.4%); high PTH (7.1%); hypoproteinemia (7.1%) and 4.3% anemia (4.3%). There were no cases of marginal ulcers and only one patient experienced worsening of a previous GERD.

Conclusion

We conclude that OATB is a safe and effective technique, demonstrating good control of the metabolic syndrome/severe diabetes. However, it becomes necessary to consider whether previous chronic nutritional deficits for correction. As a review technique for weight recurrence or comorbidities, we need more long-term evidence.

Keywords: bariatric surgery; metabolic surgery; One-anastomosis transit bipartition; OATB; SASI.

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ORGANISING A BARIATIC-CENTER: A SWISS PERSPECTIVE

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Background

The ongoing obesity epidemic leads to increasing numbers of bariatric procedures, which became one of the most common performed visceral surgeries in western countries. To deal with the increasing caseload and to measure up with the expectation of patients and referral doctors, hospitals need to offer such procedures in future. This narrative article summarises requirements, considerations and strategies for organising a modern adiposity center on the example of a European tertiary referral center.

Objectives

Describe the process needed to organise a multidisciplinary bariatric centre ex novo in a tertiary hospital. Overview the necessary steps and difficulties presented and how to overcome them.

Methods

The assembly of the bariatric centre started in the second half of 2021 with operational start in 2023. It included the setup of an interprofessional team with endocrinologist, nutritionist and physiotherapists to evaluate people with obesity. Pathways for the preoperative assessment got adjusted to the need of bariatric patients. For the hospital stay we designed specific ERAS like pathways. The professionals were educated for the preoperative assessment, treatment during the hospital stay and postoperative care. Where needed professionals were recruited. In both, the education of professionals and establishing standard of care we benefited from partnerships with already established centres. We fulfilled with scientific data and requirements of national and international recommendations. Also, surgical sets for bariatric surgery had to be composed. Facilities were integrated in the planning of the new building of the hospital.

Results

Over a period of about 18 months, we were able to create from scratch a bariatric centre that can cover all aspects of the treatment of patients with obesity, from conservative therapy to bariatric surgery and long-term follow-up.

Conclusions

The basis for the creation of a bariatric centre must be the multidisciplinary. During the process all disciplines that might be called for the treatment must be involved, educated and prepared. The core team must be made up of people who already have experience. The cooperation with others centres who already perform bariatric treatments is essential, especially in the beginning. Education, including fellowships and hospitations, is indispensable.

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OUTCOME AFTER 200 SLEEVES GASTRECTOMY, ROBOTIC USE ONLY, WITHOUT ASSISTANT TROCAR NOR HEPATIC RETRACTOR. MORE ADVANTAGES THAN DISADVANTAGES

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Between June 2020 and December 2022, 200 robotic sleeve gastrectomy for morbid obesity were performed. The technique has been standardized after the robotic learning curve of 30 patients included in this presentation. After having compared the results with a similar group of 100 patients operated by traditional laparoscopy by the same team, we update, with hindsight of 100 more patients.

After the learning curve, we chose to use the “real robotic surgery” with exclusive use of 4 trocar of the robot’s arms, without assistant trocar nor hepatic retractor.

Epidemiological data, robotic parameters and immediate results were observed at 1, 6 month and 1 year. 200 procedures have been analyzed prospectively considering the learning curve of 30 patients in assessing the results.

There were 156 women (78%) with an average age of 41 years (19 – 68). The average BMI was 43 (35 – 61). 107 patients had at least 2 comorbidities: we noted 26 diabetes, 49 high blood pressure and 105 OSAS. Morbidity: one fistula and 2 revision surgery for hemorrhagic accident for the first 30 patients of the learning curve. A medio-gastric stenosis and a portal thrombosis for the remaining 170 patients. The average overall use time of the camera has been reduced from 52 minutes to 35 minutes currently. The mean number of staple feeders used was 4.2. The average duration of hospitalization was 1.5 day. The EWL at 1 month was 31 and the WLP (weight loss percentage) 12%. The EWL at 6 months was 65 and the WLP 27% and at 1 year for 95 patients, 80% for EWL and 30% for WLP.

Due to 3D procedure and stapling optimization by algorithms, complications are lessened. Time and risk areas management is easier and more secure. Console time and duration of hospitalization have been reduced. Results at 2 years are as expected. Given the operating time and with exclusive use of robot extra cost is not a relevant argument anymore.

Currently our last procedures have been done with 3 arms only, to reduce cost, pain and duration of hospitalization.

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OUTCOMES AND SATISFACTION AFTER THE USE OF A MOBILE HEALTH APPLICATION AFTER BARIATRIC SURGERY

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Background

The efficacy of bariatric surgery on weight loss is proven. The benefits of mHealth however on the pre- and post-bariatric patient has only few evidence described in the literature.

Objectives

The aim of this study is to investigate the weight loss, quality of life and satisfaction of use of a mhealth application after bariatric surgery

Methods

146 patients who recently underwent gastric bypass or sleeve gastrectomy in one hospital used an mhealth application with information modules on surgery recovery and lifestyle changes, exercises, and asynchronous communication with a multidisciplinary care team (coordinator, dietician, physical therapist, surgeon). Participants were followed for 6 months postoperatively. Weight loss was recorded every week, and patient reported outcomes were collected preoperatively and each 3 months. Satisfaction about the app usage was recorded through a Likert scale.

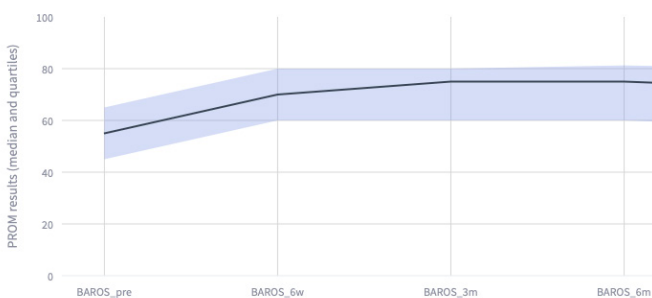
Results

The mean age was 38 (SD 13). Average weight dropped from 110 to 80kg in 6 months. The Bariatric Analysis and Reporting Outcome System (BAROS) improved from 55 (+/- 18) preoperatively to 69 (+/-21) at 6 months. Obesity and Weight-loss Quality of life instrument (OWLQoL) improved from 33 (+/-17) to 70 (+/-22) at 6 months. The adherence to exercise was 61%. 88% were satisfied with the app usage (69% satisfied, 19% very satisfied) and 95% of the patients considered the timely information delivered useful.

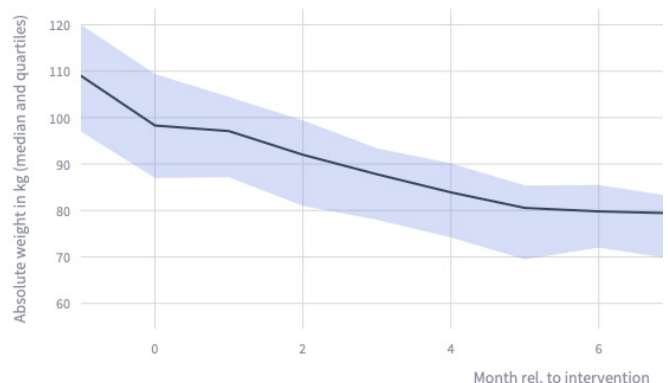
Conclusion

Mhealth application seems to be a suitable option for supporting patients after bariatric surgery. Mhealth solutions are efficient solutions to monitor, motivate patients and assess outcomes. As recent reviews suggested, behavior change methodology should be implemented to further increase adherence and motivation on the long term. Further comparative studies with a longer follow-up period are needed.

BAROS



Absolute weight per month



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OUTCOMES FOLLOWING REOPERATIVE BARIATRIC SURGERY FOLLOWING LAPAROSCOPIC SLEEVE GASTRECTOMY AT A TERTIARY CARE CENTRE

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Introduction

Laparoscopic Sleeve Gastrectomy (SG) is most common bariatric surgical procedure worldwide. Approximately 20-30% patients present with weight loss failure or reflux following SG, which might require reoperative surgery. We present the surgical outcomes and complications following reoperative bariatric surgery at a tertiary care centre.

Methods

Prospectively collected data of all patients undergoing revision bariatric surgery from 2010 until 2021 was analyzed retrospectively. Weight loss, resolution of comorbidities, and complications following revision surgery were evaluated.

Results

Twenty-six patients were included in the study. The mean age was 38.8 (10.8) years. The primary procedure performed was laparoscopic sleeve gastrectomy in all cases. Nine patients underwent RYGB (one banded RYGB) and 14 underwent OAGB (three-banded OAGB). Three patients underwent resleeve. The mean BMI before revision surgery was 42.7(9.8). It was 32.6(5.7) kg/m² and 33.0(6.1) kg/m² at 1 and 3 years respectively. Age and pre-revision surgery excess weight correlated with weight loss ($r = -0.79$ and $r = 0.99$ respectively). Symptomatic reflux developed in one patient each following resleeve and banded RYGB. One patient each developed band erosion with gastro-gastric fistula and band slippage requiring reoperation. Postoperative bleeding occurred in two patients, one requiring endoscopic clip application. One of the patients who underwent conversion to OAGB expired three weeks following surgery due to a suspected leak after being discharged in a stable condition.

Conclusion

Reoperative bariatric surgery has acceptable weight loss and low complication rates. Band placement in reoperative surgery might lead to a higher complication rate.

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OUTCOMES FOLLOWING ROBOTIC VERSUS LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS SURGERY

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Background

The Roux-en-Y gastric bypass (RYGB) is known to be safe and effective in inducing weight loss in patients with obesity. Robotic RYGB is an increasingly popular alternative to the typically laparoscopic procedure, although literature comparing outcomes remain inconclusive

Objectives

We report the largest UK study comparing robotic and laparoscopic outcomes in RYGB.

Methods

A retrospective, single-center study on the 1 year outcomes of 398 patients who underwent either a robotic (n=85) or laparoscopic (n=313) primary RYGB between January 2016 and January 2022. Demographic, operative and post-operative outcomes including weight loss and complications were analysed. Revisional RYGB were excluded.

Results

There were no statistical differences in the patient demographics including age, sex and BMI. Patients who underwent robotic RYGB achieved a median of 77.0% excess weight loss at 1 year, which is significantly greater than 70.6% in the laparoscopic group ($p = 0.033$). The median operative time was 175 (121-316) and 144 (72-263) minutes in the robotic and laparoscopic group respectively ($p < 0.001$). There were no statistically significant differences in length of stay, post-operative complication and 30 day re-admission rates. There were no significant differences in 1 year post-operative metabolic outcomes including HbA1c and number of diabetes medications taken.

Conclusion

In this single centre study, the robotic technique has shown an increased operative time and improved excess weight loss at 1 year with a comparable safety profile. This may be due to differences in the technique and size of gastrojejununal anastomosis achieved.

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OUTCOMES OF BARIATRIC SURGERY IN GERIATRIC POPULATION (>65 YEARS) COMPARED TO MATCH ADULT COHORTS IN INDIAN SUBSET OF PATIENTS

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Background

With the increasing average human lifespan and sedentary lifestyle, there is an increase in obese patients in the geriatric population. Weight loss surgery is not frequently being offered to geriatric population due to the concerns of increased morbidity, mortality and nutritional complications. The purpose of the study was to evaluate the safety and outcome of bariatric surgery in patients >65 years of age.

Methods

A retrospective review of prospectively collected data on post bariatric patients at a single centre from Jan. 2017 to Dec 2019 was used to analyze the weight loss, operative complications and outcome.

Results

A total of 1544 patients were operated during the period, out of which 124 (8.03%) patients were 65 years and older. They were identified and were compared with 124 adult patients matched for type of surgery. Out of 124 patients in each group, 43 (34.6 %) had undergone Roux-en-Y gastric bypass, 29 (23.3%) one anastomosis gastric bypass, and 52 (41.9 %) sleeve gastrectomy. The average age was 68.7 years and 43.5 years in the geriatric and adult groups respectively. Average preoperative weight and BMI were 108.4 kg and 116.2 kg and 46.29 kg/m² and 41.08 kg/m² in the geriatric and adult groups respectively. The operative outcomes were similar for the 2 groups as determined by the operative time (75 versus 70 minutes), length of stay (52 hours versus 48 days), and 30-day readmission rate (6.0% versus 7.4%). The postoperative complication rates were low in the adult patients compared to 65 years old (bleeding 1.0%, pulmonary 1.5 %, cardiac 1%, wound 0.5%, and 30-day mortality rate 0%). The percentage of excess body weight loss in both the groups at three year follow up were similar.

Conclusion

Bariatric surgery could be an effective and safe treatment modality for patients in Geriatric age group to enhance their quality of life and reduce dependency on others.

O-208

OUTCOMES OF BARIATRIC/METABOLIC SURGERY FOR MORBIDLY OBESE ADOLESCENTS: A MULTICENTER STUDY IN KOREA

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Objective

Childhood and adolescent obesity is associated with various comorbidities; most persist into adulthood. Approximately 50% of adolescents with obesity have one or more comorbidities in their youth, and obesity can lead to long-term organ dysfunction and failure. Conventional treatments for adolescent obesity, including behavioral and pharmacological approaches, have demonstrated modest and unsustainable effects on weight loss. We sought to evaluate the long-term outcomes of bariatric surgery for morbidly obese adolescents on weight reduction, comorbidity resolution, and postoperative adverse events.

Methods

Prospectively collected multi-institutional consortium data were retrieved. Adolescents (age ≤ 19 years) with a body mass index (BMI) over 30 kg/m² who underwent bariatric surgery between January 2003 and December 2021 were enrolled. The postoperative weight profile, comorbidity resolution, and perioperative complications were analyzed.

Results

Sixty adolescents underwent bariatric surgery during the study period; 21 underwent laparoscopic Roux-en-Y gastric bypass and 39 laparoscopic sleeve gastrectomy. The actual body weight and BMI significantly decreased from 114.8 \pm 20.9 kg and 40.6 \pm 6.7 kg/m² to 86.4 \pm 23.3 kg and 30.4 \pm 7.0 kg/m² after a mean follow-up of 31 months, respectively ($p < 0.05$ for both). The percent excess weight loss (%EWL) at 1, 2, 3, and 5 years postoperatively were 71.9 \pm 30.4%, 88.7 \pm 34.2%, 82.7 \pm 26.2 %, and 70.3 \pm 32.7 %, respectively. The %EWL was less than 50% in 7 out of 60 patients at 12 months postoperatively. T2DM was resolved in all patients. Sleep apnea and hypertension significantly improved after surgery. One patient experienced immediate postoperative intraluminal bleeding, which was successfully managed conservatively.

Conclusion

Bariatric surgery led to significant weight loss and comorbidity resolution in morbidly obese adolescents with obesity in the long-term follow-up.

Keywords: Adolescents, Long-term outcome, Bariatric metabolic surgery.

O-209

OUTCOMES OF ONE ANASTOMOSIS GASTRIC BYPASS, 6-YEARS EXPERIENCE OF 1520 CASESMahmoud Abdelaal - Osama Taha*Assiut University Hospital, Dept. of Bariatric and Plastic Surgery, Assiut, Egypt***Background**

Omega loop gastric bypass (OLGB) has been viewed with skepticism after the failure of the Bold Mason loop. During the past 15 years, a growing number of authors worldwide approved that OLGB is a safe and effective procedure, which appears clearly from the operative outcome and long-term follow-up of consecutive cohort studies of patients who underwent OLGB. The aim of this study is to evaluate the outcomes of OLGB at the bariatric center of our university hospital between 2009 and 2015.

Methods

The data of 1520 patients who underwent OLGB from November 2009 to December 2015 at our center were reviewed. Mean age was 37.15 years, mean preoperative BMI was 46.8 ± 6.6 kg/m², mean preoperative weight was 127.4 ± 25.3 kg, and 62.7% were women. Diabetes mellitus (DM) affected 683 (44.9%) of the 1520 patients, whereas 773 of the 1520 patients (50.9%) presented with hypertension. The mean operative time was 35 min.

Results

The 1-year postoperative BMI mean decreased to 29.6 ± 3.1 kg/m², and at the 3-year follow-up, it was 27.5 ± 3.4 kg/m². The mean of weight decreased to 81.3 ± 16.7 kg and to 78.9 ± 16.9 kg at the 1-year and the 3-year follow-up, respectively. Mortality rate was 0.1%. Overall complications were 9.3%; 0.8% required reoperations. Early complications were encountered in 50 patients (3.3%), and the late complications rate was (6.1%).

Conclusions

In this study, greater excess weight loss was observed with OLGB which appeared to be a short, simple, low-risk, effective, and durable bariatric procedure.

O-210
OUTCOMES OF SINGLE ANASTAMOSIS SLEEVE JEJUNAL BYPASS (SASJ) – 6 YEAR STUDY

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Background

During 2015-2017, Transit bipartition procedures like SASI (Single anastomosis sleeve ileal bypass) gained popularity and generated lot of interest among the bariatric surgeons as they preserve the continuity to duodenum and small bowel. However Protein malnutrition and excess weight loss after SASI has always been a concern. For this reason, we started offering Transit Bipartition procedure by creating a sleeve and use a smaller a more proximal and smaller Bilio-pancreatic limb i.e. Single anastomosis sleeve jejunal bypass (SASJ).

Objectives

To study Single Anastomosis Sleeve Jejunal Bypass (SASJ) as a treatment choice for morbid obesity and compare with existing standard procedures like LSG, RYGB, OAGB. Primary Objective – 1. Weight loss at 1 year,, 3 year, 5 year and 6 years – Calculated as % total weight loss. Secondary objective include BMI loss, Co-morbidities resolution and nutrition status

Methods

This is a 6 year prospectively study by collecting data of patients who underwent SASJ in a single centre. All the data was analysed using

Results

Our study included a total of 72 patients. 6 Year data was available for 6 patients, 5 year follow up data was available for 9 patients, 3 year follow up data for 38 patients and 1 year data for 72 patients. Average Pre-op BMI of our patients is 43+/-10, Average BMI at 1 year, 3 year, 5 year and 6 year are 26.2 +/-4.2, 26.7+/- 4.5, 26.2+/- 4.2 and 27.1 +/- 4.1 respectively. %TBWL at 1 year, 3 year, 5 year and 6 year follow up is 37.4 +/-7.6, 39.2+/-12.1, 38.4+/- 11.2 and 39.5 +/-9.3 respectively. Significance in resolution of Co-morbidities like has been documented.

Conclusion

Single Anastomosis Sleeve Jejunal Bypass (SASJ) as a choice of surgery for patients with metabolic syndrome appears to be a promising Bi-partition procedure. %TWBL and Resolution of co-morbidities in our study is comparable other bypass procedures like OAGB & RYGB. Our study shows promising results and we feel SASJ provides benefits of other malabsorptive procedures like OAGB and RYGB without much nutritional impairment.

O-211

PATIENT'S PERSPECTIVE ON FOLLOW-UP CARE AFTER BARIATRIC SURGERY IN GERMANY

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Background

Lifelong follow-up care is recommended for patients undergoing bariatric surgery. Follow-up care is needed for two main reasons. First of all, patients, who attend follow-up care, have a better outcome in terms of weight-loss and resolution of comorbidities. Secondly, long term complications can be detected and adequate therapy can be started. However, the number of patients attending the follow-up appointments decreases overtime. Literature suggests that less than 50% of patients attend follow-up 10 years after surgery. To improve the outcome after bariatric surgery, it is needed to improve follow-up care after bariatric surgery.

Objectives

Our main objective was to understand the patient's perspective on follow-up care after bariatric surgery.

Methods

We asked patients, who attended at least one follow-up appointment in our university hospital to complete an online questionnaire. We were mainly interested in four aspects of the follow-up care: expectations, positive and negative things as well as suggestion for optimization. To analyze the data, we performed qualitative content analysis.

Results

Overall, we contacted 238 patients. Of these 238 patients 128 answered to at least one of the four questions, resulting in a return rate of 54%. 105 patients shared their expectations for the follow-up care. The most common expectation for follow-up care was that patients receive advice on nutrition, exercise or psychological support. Interestingly, only one patient expected to have a better outcome by attending the follow-up care. Positive aspects included a scheduling ahead of time and the lab results. Unfortunately, around 17% of patients felt that our program included too little advice and information. Conversely, patients suggested to include more psychological support (15%), nutritional advice (10%), exercise (5%), as well as more information on plastic surgery for skin reduction (12%) in our follow-up care.

Conclusion

Based on our data patients mostly expect to receive advice on nutrition, exercise as well psychological support after bariatric surgery. Unfortunately, some patients felt that their expectations with our current program were not met. Therefore, more needs-based advisory services should be implemented. Additionally, managing expectations towards follow-up care before surgery could also help to improve the attendance at follow-up care.

O-212

PATIENTS' PERSPECTIVES ON TELEMEDICINE: IS IT A FUTURE CONCEPT FOR BARIATRIC PROGRAMS?

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Background

Telemedicine is becoming an increasingly feasible option for patients with chronic diseases due to its convenience, cost-effectiveness, and ease of access. While there are certain limitations to telemedicine that may cause hesitancy in its use, the benefits can be appreciated by those seeking repetitive care. This content analysis explored patients' perceptions of a bariatric program on their experience with telemedicine and virtual consultations.

Objectives

Setting: Tertiary, academic hospital, Switzerland.

Methods

We interviewed 19 patients from a structured bariatric program about their perspectives on their health regarding their overweight and its risk factors in a broader study in the context of COVID-19. We used a qualitative content analysis following the approach of Elo and Kyngäs, which involves systematic and inductive access to analyzing the data including four steps: familiarization with the data, coding and categorizing, using Quirkos, qualitative analysis software. At last we interpreted the data, guided by the developed categories.

Results

12 patients (63.16%) stated they would like to continue telecommunication, while 4 (21.05%) were still indecisive and 3 (15.79%) were in favor of continued face-to-face consultations. Some patients reported facing obstacles that limit their access to healthcare, such as restricted regional and logistical resources and socioeconomic conditions. The implementation of telemedicine visits was very positively received by many, as this often went hand in hand with substantial savings in time and costs. One patient stated: "... every appointment was only by phone; that was actually faster and easier too" (P15). Some reported that they only attended essential appointments in person if needed. However, telemedicine has its limits for patients: "... it's quite strange to present your life to someone ... via video openly" (P11).

Conclusion

With its widespread acceptability by the public, telemedicine offers patients convenient, affordable options for routine follow-up visits. Most participants had favorable experiences during COVID-19 with telephone care and requested repetitive possibilities for virtual care. The outcomes of direct patient feedback confirm the requirement for the inclusion of virtual care options (e.g., by offering consultations via phone or video) in routine bariatric follow-up and may improve continuity of care in pre-and post-bariatric surgery patients.

O-213

PEPSIN IN SALIVA FOR THE DIAGNOSIS OF EROSIIVE ESOPHAGITIS POST SLEEVE GASTRECTOMY

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Background

The development of post-op erosive esophagitis (EE) is one of the major limitations of Laparoscopic Sleeve Gastrectomy (LSG), requiring regular post-operative endoscopic surveillance for early detection of Barrett's or esophageal adenocarcinoma. Given the popularity of LSG as the most common metabolic-bariatric surgery performed worldwide, the volume of cases requiring routine endoscopic surveillance with esophago-gastro-duodenoscopy (EGD) can strain our limited healthcare resources. Hence, there is a need for a more non-invasive yet precise tool for screening EE in post-LSG patients.

Objectives

Our study evaluates the potential of salivary pepsin concentration as a marker for esophageal injury/EE and therefore as an alternative to endoscopic surveillance post-LSG.

Methods

Twenty-patients on routine post-LSG endoscopic surveillance between June-September 2022 were recruited for this correlational pilot study. These scopes were part of the routine EGD post-LSG at 1 year and subsequently every 2–3 as recommended by the IFSO EGD guidelines in 2018. Proton pump inhibitor and H2 antagonist therapy were discontinued at least 3 days before. Under supervision, fasting and post-prandial saliva samples were collected and analyzed by Peptest lateral flow device. Patients also completed a validated 25-items QoLRAD questionnaire. The findings from endoscopy were then compared with pepsin salivary concentration as well as symptoms elicited by our questionnaire.

Results

We found a significant correlation between positive endoscopic findings of EE and salivary pepsin concentrations. The normal-group had a lower mean fasting pepsin level ($13.13 \text{ ng/mL} \pm 18.97$) versus the EE-group ($90.55 \text{ ng/mL} \pm 81.28$) ($p = 0.009$) and lower mean post-prandial pepsin level ($30.50 \text{ ng/mL} \pm 57.72$) versus the EE-group ($135.09 \text{ ng/mL} \pm 130.17$) ($p = 0.02$). The predictive probabilities from the binary regression of fasting and post-prandial pepsin concentrations yield AUC of 0.955 ± 0.044 (95% CI, 0.868 to 1.000, $p < 0.001$).

Conclusion

Our study distinctively identified salivary pepsin to have excellent sensitivity and negative predictive value in EE. This could potentially help reduce the need for post-LSG EGD in asymptomatic patients with low salivary pepsin.

O-214

PERCEPTION AND PRACTICE OF BARIATRIC SURGERY AND REPRODUCTIVE HEALTH IN WOMEN: A CROSS-SECTIONAL STUDY OF CHINESE BARIATRIC SURGEONS

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Background and Purpose

Western studies have explored bariatric surgeons concerning their views on bariatric-metabolic surgery (MBS) and reproductive health, but Asian data are lacking. The aim of this study is to explore the perception and practice of bariatric surgeons on the reproductive health of female patients who underwent bariatric-metabolic surgery in China to better guide clinical practice and improve clinical outcomes.

Method

An online questionnaire of 31 questions developed by bariatric surgeons was sent to one online communication group (WeChat group) whose members are Chinese bariatric surgeons.

Result

A total of 87 bariatric surgeons from mainland China were surveyed. Almost all (97.7%, 85/87) surgeons considered the reproductive health conversation for women who underwent BS to be important or very important. Only 1/4 of surgeons routinely discuss reproductive health-related issues with patients, and only 56% of these doctors always ask patients for postoperative contraception. Less than 20% of bariatric surgeons have full knowledge of postoperative contraception, most (73.6%) surgeons recommend condoms as the first choice, and 20% of them do not take the initiative to advise patients on contraceptive methods. Nearly 40% of them believe that gynecologists should be responsible for providing contraception. More than 35% of weight loss doctors have never been involved in the co-management of pregnancy in patients with a history of BMS.

Conclusion

Although most bariatric surgeons are aware of the importance of female reproductive health, there is a large gap in the perception and clinical practice of bariatric surgeons in terms of reproductive health. It is necessary to further strengthen the education of bariatric surgeons and enhance cooperation with gynecology, obstetrics and other multi-disciplinary disciplines to bring better clinical outcomes.

O-215

PERIOPERATIVE OUTCOMES OF ROBOTIC AND LAPAROSCOPIC SURGERY IN PATIENTS WITH SEVERE OBESITY

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Background

There are a number of challenges to conventional laparoscopy in performing surgery on patients with severe obesity including limited motion of instruments due to a thick abdominal wall, hepatomegaly, and increased intra-abdominal adiposity with limited workplace. The robotic system helps to overcome these barriers and may have clinical benefits to laparoscopy in operating on patients with severe obesity.

Objectives

To determine the effects of robotic versus laparoscopic bariatric surgery on perioperative outcomes of bariatric patients with BMI >50 and ≤40.

Methods

Totally robotic (ROB, n=116) and laparoscopic (LAP, n=119) Roux-en-Y gastric bypass (RYGB) and sleeve gastrectomy (SG) were performed by a single surgeon. Patients included those with a BMI >50 (mean=55.1, n=133) and those with a BMI ≤40 (mean=37.9, n=102). Outcome measures were assessed for all patients following ROB vs. LAP RYGB (n=115) or SG (n=120) and included: 1) patient characteristics (age, weight, BMI, co-morbidities, gender), 2) operative (OP) time, 3) length of hospital stay (LOS), 4) 30-day readmissions, reoperations, and major complications.

Results

For RYGB, there were no significant differences in age, gender or number of co-morbidities between the ROB and LAP patients with BMI >50 or ≤40. OP times of both BMI groups were significantly ($p < 0.01$) lower with the ROB vs. LAP approach (BMI >50 ROB=105.3 min, LAP=122.7; BMI ≤40 ROB=93.9 min, LAP=111.5). LOS was also significantly ($p < 0.05$) less with robotic RYGB (BMI >50 ROB=1.20 d, LAP=1.46 d; BMI ≤40 ROB=1.13 d, LAP=1.28). Major complications rates (30-d) for patients with BMI >50 were 2.7% ROB, 9.7% LAP, with no major complications for BMI ≤40 ROB or LAP. With SG, OP times did not differ between BMI groups nor between the LAP and ROB procedures. LOS was lower ($p < 0.05$) when performed robotic (BMI >50 ROB=1.14 d, LAP=1.25 d; BMI ≤40 ROB=1.08 d, LAP=1.37 d). There were no major 30-day complications for patients with BMI >50 with the ROB or LAP approach, no complications for BMI ≤40 ROB and two (6.1%) for LAP.

Conclusion

Surgical outcomes were improved with the robotic system over conventional laparoscopy for bariatric patients with high (>50) and lower BMI (≤40), i.e. reduced OP times, LOS, complications for RYGB and lower LOS for SG.

O-216

PHARMACOLOGICAL PROPHYLACTIC PROTOCOL FOR PREVENTION OF POSTOPERATIVE NAUSEA AND VOMITING AFTER ENDOSCOPIC SLEEVE GASTRECTOMY

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Background

Endoscopic Sleeve Gastroplasty (ESG) is a primary, reversible, and repeatable, minimally invasive bariatric endoscopic procedure designed for obesity treatment. In some cases, patients may complain of discomfort, especially in the first 24/48 hours after the procedure, due to postoperative nausea and vomiting.

Objectives

In this study we evaluate the efficacy of prophylactic anti-emetic medication protocol.

Methods

We conducted a prospective study enrolling 10 patients aged 41-62 years with BMI ranged from 32 to 41 kg/m². Participants were submitted to primary ESG and a lifestyle modification included a low-calorie diet. Our anti-emetic protocol included: the infusion of 150mg Fosaprepitant (alters cytochrome P450 activity) 1 hour before the procedure; during induction of general anesthesia, 8mg dexamethasone were infused; 0.15mg/kg ondasetron (serotonin 5-HT₃ receptor antagonist) were infused during the procedure. 8mg more ondasetron were infused every 12 hours for the next 24 hours, after procedure. All patients were discharged on the first or second postoperative day with the indication to take ondasetron as needed in case of nausea and/or episodes of vomiting. All patients were followed-up for three months.

Results

Between November 2022 and January 2023, 10 participants were submitted to primary ESG. We applied the outlined protocol to all patients undergoing the procedure. No patients experienced nausea or vomiting in the postoperative period.

Conclusion

In our preliminary experience, our anti-emetic drug protocol has proven effective in 100% of cases.

O-217

PORTOMESENERIC VEIN THROMBOSIS IN PATIENTS UNDERGOING SLEEVE GASTRECTOMY: A META-ANALYSIS OF 101,865 PATIENTS

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Background

Portomesenteric vein thrombosis (PMVT) is a rare but potentially fatal complication of sleeve gastrectomy (SG). The rising prevalence of SG has led to a surge in the occurrence of PMVT, while the associated risk factors have not been fully elucidated.

Objectives

This study aims to determine the incidence and risk factors of PMVT in patients undergoing SG.

Methods

A comprehensive literature search was performed in Pubmed (MEDLINE) and EMBASE databases. Proportion and regression meta-analyses were conducted.

Results

A total of 75 studies and 101,865 patients undergoing SG and 355 patients with PMVT were identified. At a mean follow-up of 14.4 (SD: 16.3) months the incidence of PMVT was found to be 0.48% (95%CI: 0.39-0.60%). The majority of the population presented with abdominal pain (91.8%) at an average of 22.4 days postoperatively and PMV was mainly diagnosed with CT scan (92.4%). Hematologic abnormalities predisposing to thrombophilia were identified in 34.9% of the population. Age, BMI, type of thromboprophylaxis, and duration of thromboprophylaxis were not significantly associated with the incidence of PMVT. Treatment included therapeutic anticoagulation in 93.4% and the mortality rate was 4/355 (1.1%).

Conclusion

PMVT is a rare complication of sleeve gastrectomy with an incidence rate <1% that is not affected by the duration or type of thromboprophylaxis administered postoperatively.

O-218

PORTOMESENERIC VENOUS THROMBOSIS POST-BARIATRIC SURGERY: A RETROSPECTIVE STUDY OF MULTI-CENTER FROM CHINA

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Background

Portomesenteric vein thrombosis (PMVT) is a rare but severe (sometimes even Life-threatening) complication after bariatric surgeries. The incidence of this complication after bariatric surgeries was 0.2%-1.81% according to references. However, the prevalence, clinical presentation, management and sequelae in China and even in Asian countries remain poorly understood.

Objectives

To investigate the incidence of PMVT after bariatric surgery in China and explore the possible causes, prevention and treatment of this complication.

Methods

We retrospectively collected general information and perioperative data from 28 high-volume bariatric-metabolic centers of China. All data were analyzed.

Results

We enrolled a total of 43732 obesity patients who have accepted different bariatric procedures in the past 15 years. Sleeve gastrectomy (SG) account for 86%, the other procedures including RYGB, OAGB, SADIS, Gastric Banding et al account for 14%. A total of 23 patients (All were performed SG) occurred PMVT after bariatric surgery (23/43732, 0.05%). 15 cases were female (15/23, 65.2%) and 8 cases were male (8/23, 34.8%), with a mean age of 34.9 ± 9.5 and the mean BMI was 41.7 ± 8.4 kg/m². Preoperative comorbidities including diabetes, hypertension, hyperlipidemia, cirrhosis, venous thrombosis and obstructive sleep apnea-hypopnea syndrome were recorded in 7, 8, 21, 2, 3, 10 patients respectively. Abdominal pain and distention were the most common clinical presentations (100%). The mean diagnostic time of PMVT was 16.7 (ranging from 7 to 40) days after surgery. All cases were diagnosed by enhanced CT. Five patients underwent partial small bowel resection due to bowel necrosis. No mortality was reported.

Conclusion

The incidence of PMVT after bariatric surgery in China is lower than that reported in the existing literatures (It may be due to ethnic differences), and seems prefer to occur after SG. It is still difficult to determine what kind of patients should be taken preventive measures to avoid this complication. Early diagnosis is crucial for treatment and prognosis.

O-219

POST MINI GASTRIC BYPASS PETERSON'S HERNIA, TO CLOSE THE DEFECT OR NOT

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Background

Internal hernia (IH) through Petersen's defect after gastro-jejunal bypass is not common, yet it is a serious complication. The incidence is around 4% after Roux en Y bypass. Review of literatures showed only case reports, incidence is estimated to be 1/5000.

Objectives

Discussion of the role of routine closure of Petersen's defect is indicated or not.

Methods

This is a case report of three patients developed SBO due to IH after MGBP. SL, 27 yrs old male, underwent MGBP + Mid Cal banding few weeks after surgery the patient developed recurrent bouts of vomiting, intolerance to food and upper abdominal pain. Later on, he was admitted with features of acute SBO, CT abdomen confirmed an acute SBO due to internal hernia, emergency laparotomy performed. KL, 43 yrs, old female, post gastric band removal converted to MGBP plus MidCal band. Six months postoperatively, she was admitted to ED with CT diagnosis of SBO which resolved without surgery. Five months later she was admitted again with severe abdominal pain and vomiting for two days, CT showed subacute SBO, emergency laparotomy performed. MB, 71 yrs old female, MGBP, developed SBO within five days post operatively, CT confirmed SBO with very distended bowel, delay in taking her back to theatre resulted in resection of significant segment of her bowel due to ischaemia, in this patient, the surgeon reported that he closed the Petersen defect.

Results

Typical history of a post MGBP IH is recurrent bouts of vague chronic abdominal pain, associated with nausea and some distension which overtime develops into acute intestinal obstruction (SBO).

Conclusion

Symptoms are usually vague and not specific, recurrence happens till progression into complete obstruction, diagnosis is usually delayed till acute SBO or closed loop ischemic bowel developed. Abdominal CT scan should be obtained in all post MGBP SBO. We feel that there is no enough evidence to recommend a definite attitude for routine closure of the Petersen's defect in MGBP. Partial closure of the Petersen's defect may convert the defect into more serious condition.

O-220
POST-OPERATIVE BIOCHEMISTRY SURVEILLANCE: IS THERE MORE TO KNOW?

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Background

Three major laparoscopic bariatric surgeries performed at our trust are Sleeve Gastrectomy (SG), Roux-en-Y Gastric Bypass (RNYGB) and One Anastomosis Gastric Bypass (OAGB). Preoperatively deficiencies are corrected, and we monitor patient's biochemistry at three, six, twelve, eighteen and twenty-four months, postoperatively.

Objective

Our intention was to look at patient's biochemistry for the customary two-year follow up period to assess whether we are over testing or over treating our patients.

Methods

We retrospectively studied our bariatric surgery cohort during 2018-2019 and calculated percentages of patients with deficiencies requiring supplementation. We compared different interventions by measuring relative risk at different follow up intervals.

Results

We reviewed results of 245 patients. Among those 35.92% (88) were SG, 37.55% (92) were OAGB and 26.53% (65) were RNYGB. Post operatively B12 and copper levels tended to be high, and suboptimal or deficient levels of zinc, iron and folate were noted. Zinc deficiencies in a very small group of patients (6.5%, n=16) occurred at three months requiring oral supplementation (<10umli/L), relative risk increased to 1.56 at 6 months (n=25) and highest to 2.88 (n=46) at 12 months. Relative risk of zinc deficiency in OAGB patients was 1.76 (n=24 v/s n=13) and 1.88 (n=24 v/s n=9) times higher at 12 months; 3.1(n=13 v/s n=4) and 2.29 (n=13 v/s n=4) times higher at 18months, compared to SG and RNYGB, respectively.

Conclusion

Post operative monitoring of zinc, iron and folate are important. The risk of deficiency increases with increasing post operative follow up time, with highest risk at 12 months. Patients with OAGB require closer monitoring and careful surveillance compared to SG and RNYGB.

O-221

POUCH REVISION IN COMBINATION WITH MINIMIZER PLACEMENT AS REVISIONAL PROCEDURE IN PATIENTS WITH INSUFFICIENT WEIGHT LOSS/WEIGHT RECURRENCE POST-RYGB (REPOBA)

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Background

Obesity is a growing global health problem with serious health consequences due to obesity related comorbidities. Bariatric surgery and specifically Roux-en-Y-gastric bypass (RYGB) has been proven to be the most effective long-term treatment for severe obesity. However, about 10-20% of patients encounter insufficient weight loss (IWL) or weight recurrence (WR) after RYGB. This might be due to a decreased restrictive function of the pouch.

Objectives

This study aimed to investigate the short- and long-term effects of revisional pouch surgery combined with Minimizer placement in patients with IWL or WR after RYGB.

Methods

All patients who underwent the above-described procedure in the Zuyderland Medical Center between 01.01.2016 and 31.12.2021 were included. During the follow-up at the Dutch Obesity Clinic South the following outcome measures were collected up to 2 years post-revisional surgery: weight change, comorbidity resolution and complications.

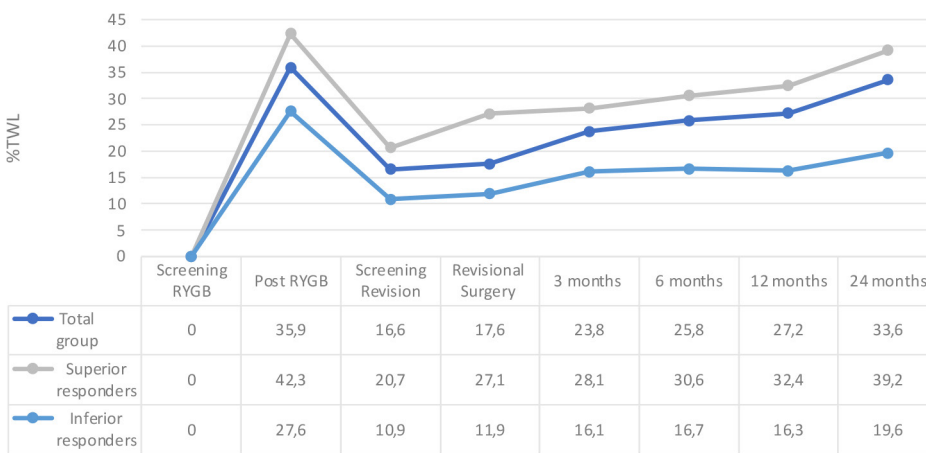
Results

Thirty-six patients were included with a mean %TWL of 12.9% and 15.9% 12 and 24 months post revisional surgery respectively. This resulted in a cumulative %TWL (including the primary procedure) of 33.6% 24 months after the revisional procedure. Of interest, patients with a superior response after the primary RYGB procedure (%TWL ≥ 35%) responded better in %TWL post revisional surgery compared to patients with an inferior response after primary RYGB (Graph 1). Four Clavien-Dindo 3b classified complications were reported in three patients. There was one band related complication: one patient underwent repositioning of the minimizer due to slippage. This complication occurred just outside the 2-year follow-up.

Conclusions

Pouch revision in combination with Minimizer placement resulted in significant additional weight loss up to 2 years of follow-up. Patients with a superior response at the initial RYGB procedure perform superiorly after revisional surgery.

Mean %TWL pre revision up to 2 years post revision



Graph 1. Mean %TWL from primary RYGB over 2 year follow-up post revisional surgery.

O-222

PREDICTING CHRONIC B1 DEFICIENCY AND SUBOPTIMAL B1 MONITORING IN PATIENTS WITH METABOLIC AND BARIATRIC SURGERY

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Background

Vitamin B1 deficiency after metabolic and bariatric surgery (MBS) is often insidious and if unrecognized can lead to irreversible damage or death. This has led to an alarming number of malpractice lawsuits. Inadequate management and monitoring of B1 deficiency may be at the root of this issue.

Objectives

To identify a combination of features that predict (a) chronic B1 deficiency and (b) B1 never measured in patients with MBS using both statistical methods and machine learning models (ML).

Methods

A random sample from a large MBS practice (n=878) was generated. A combination of traditional and ML models was used. Bivariate negative binomial regression was used to model “number of times” thiamin deficient using 52 lab values and demographics as potential predictors. To explain why B1 was never measured, ML models (Decision Tree, Bayesnet) were generated. Labs not collected were treated as informative and entered as additional features in the ML analyses. Incident risk ratios (IRRs) and most predictive feature sets were generated.

Results

Statistical methods identified a strong association between chronic B1 deficiency and abnormal labs associated with neurological symptoms and malnutrition, including vitamin B6 deficiency, low protein and albumin, low MCV, ALT, AST, and elevated iPTH and creatinine (IRRs: 1.7-4.6, Figure 1). Demographic factors such as living alone and lack of private insurance were also associated with chronic B1 deficiency. ML indicated that vitamins B6, C and retinol never collected predicted nearly 95% cases (AUC = 0.948) of B1 uncollected.

Conclusion

Our analyses indicate that clinical as well as social determinants place some patients with MBS at risk for potentially life-threatening episodes of thiamine deficiency. Additionally, our ML analysis showed that patients who never had B1 measured were also unmeasured on several other micronutrients—indicating clinician hesitancy to order labs uncovered by insurance. Given the litigious nature of thiamine deficiency, it is vital for clinicians to identify and treat thiamine deficiency not only via lab screening, but also during critical times of poor dietary intake and/ or additional physiological needs. Indeed, some patients with MBS may require closer monitoring under specific social circumstances.

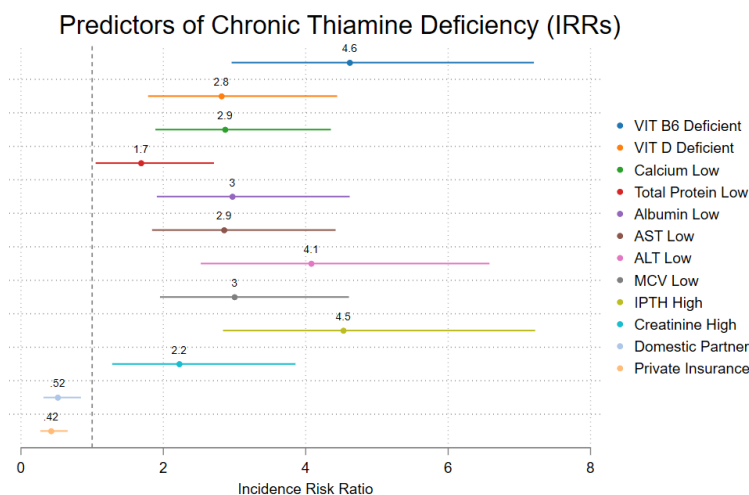


Figure 1. IRR in MBS.

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PREDICTORS OF SUSTAINED WEIGHT LOSS - A QUASI-RANDOMIZED TRIAL

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Background

Calorie-deficit diet, in combination with increased energy expenditure through physical activities, remains the cornerstone of conventional weight loss strategies, irrespective of their efficacy and long-term sustainability for different BMI categories. Therefore, it is required to weigh the efficacy of the treatment strategy.

Objectives

To identify the predictors of sustainable weight loss outcome in BMI ≥ 25 kg/m² over one year.

Methods

Prospective cohort study.

Inclusion criteria

All consented individuals with BMI ≥ 25 between 18-65 years were enrolled in the study. Pregnant, lactating mothers, acute and severe chronic illness were excluded.

Intervention

Detailed clinical and nutritional evaluation done at baseline, 3,6- and 12-month intervals. WHO quality of life (WHO-QoL), Global Physical Activity Performa (GPAQ), Dysfunction analysis questionnaire (DAQ) and Kuppaswami Socio-Economic Status Scale (KPS Scale) were used. Individuals were advised calorie deficit diet. Detailed counseling was given, and educational materials were provided. Yoga classes and support group meetings were arranged.

Statistical Analysis

Pearson/Spearman correction was used to see the bivariate association of factors affecting weight loss. Variables having p-value < 0.2 were taken in a stepwise multivariate linear regression model. P-value < 0.05 was used to indicate statistical significance.

Results

A total of 285 patients were enrolled. The mean age was 39 (± 11) years, height 161 (± 9.1) cm, weight 86.8 (± 33.4) kg, Waist circumference (WC) 105.6 (± 11.8) cm, waist to hip ratio (WHR) 0.93 (± 0.09) cm, BP systolic pressure 124.9 (± 15.3) and diastolic 81 (± 10) mm Hg, WHOQOL score on the scale of 100 were between 58-70 on all four health-related QoL domains. Overall QoL out of 5 marks was 3.5 (± 0.88), and health-related QoL was 2.7 (± 0.83). Weight at 3,6 and 12 months were 83.5 (± 14.6), 82.6 (± 14.3), and 82 (± 14.6), respectively. 3 kg median weight loss was observed until six months and 3.5 kg at 12 months intervals. Total sitting time was 7.9 (± 3.5) hrs. KPS score was 20.3 (± 4.8). EWL at three months has shown 3 kg of weight change while sitting time negatively correlates with the weight loss pattern at 12 months.

Conclusion

Insufficient weight loss at three months indicates the requirement for a change in treatment strategy.

O-224

PREGNANCY AFTER BARIATRIC SURGERY: A NARRATIVE LITERATURE REVIEW ON MATERNAL NUTRITIONAL STATUS AND NUTRITIONAL SUPPLEMENTATION MANAGEMENT

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An increasing number of women undergoing bariatric surgery are at childbearing age. Each bariatric surgery, particularly malabsorptive procedures, has a different effect on nutritional absorption and predisposes patients to deficiencies in nutrients that are essential for healthy fetal development.

The aim of this review is to summarize the existing literature concerning the most common deficiencies which arise before and during pregnancy after metabolic surgery, such as vitamin and nutrient deficiencies and their appropriate compensation through diet and supplementation.

A literature search was conducted using Pubmed and Medline database for articles published until January 2023.

Based on this review it is recommended to investigate preconception nutritional status in order to set up the right supplementation and evaluate at each trimester serum concentrations of several micronutrients. In addition, on the basis of available literature and also on our team experience, one of the major problem concerning pregnancy post metabolic surgery is the clinic follow-up, especially regarding nutritional aspects. It is becoming increasingly evident that several women are not followed at this stage by specialized clinical staff.

Thus emphasizing the importance of a multidisciplinary management and the crucial role of personalized nutritional counseling set by clinical dietitians to ensure the right supplementation and monitor gestational weight gain, in order to avoid vitamin and nutrient deficiencies and ensure the correct fetal development.

O-225

PRELIMINARY DATA ON A SINGLE CENTER EXPERIENCE OF THREE YEARS OF ROUX-EN-Y GASTRIC BYPASS IN PATIENTS WITH GASTROESOPHAGEAL REFLUX DISEASE

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Background

Gastroesophageal reflux disease (GERD) affects about 20% of the general population. Obesity is one of the known risk factors for its development. Laparoscopic Roux-en-Y gastric bypass (LRYGB) has been shown to be a feasible treatment option for patients with a body mass index (BMI) between 35-40 kg/m² and reflux. As of now, little data exist on the comparison of RYGB as a primary vs. secondary procedure after sleeve gastrectomy (SG) or gastric band (GB) in these patients.

Objectives

The aim of this study was to assess short-term outcomes and postoperative complications for patients with GERD undergoing LRYGB as a primary vs. secondary procedure.

Methods

This study was performed as a single centre retrospective analysis of bariatric patients with GERD undergoing LRYGB between March 2019 and March 2022. Basic demographics, BMI, previous bariatric surgery, gastroscopic evaluation, reflux scores, and 30-day postoperative outcomes were analysed. Data were calculated according to standard statistical methods.

Results

A total of 48 patients underwent LRYGB surgery, 35 primary (73%) vs. 13 secondary (27%), of which 10 patients had SG, two patients GJ redo, and one patient GB before. Mean BMI was 37.5 kg/m² at the time of intervention. Time between surgeries was 70.00 ± 9.21 months. 90% patients were female (n=43). PH impedance was performed in 30 patients (63%) prior to surgery with a mean DeMeester-Score of 22.71 ± 5.71. Preoperative gastroscopy was performed in all patients and showed hiatal hernia in 56%. Overall complication rate was 25% (n=12), 10% of the patients required revisional surgery (n=5) because of roux anastomotic stenosis (n=2), intraluminal bleeding (n=1), perforation in the alimentary limb (n=1), and incarcerated trocar site hernia (n=1). Complication rate was significantly higher in revisional cases (p=0.034; OR 4.14). There were no mortalities.

Conclusion

LRYGB is a safe procedure for patients with obesity and GERD. However, patients with previous bariatric interventions show an increased rate of complications and subsequent surgeries. This analysis supports the importance of routine upper gastrointestinal endoscopic assessment prior to bariatric procedures, thus decreasing the risk for developing GERD. Further patient follow-up will be required to assess long-term reflux resolution rates.

O-226

PRELIMINARY REPORT OF POSTOPERATIVE COMPLICATIONS AFTER SLEEVE GASTRECTOMY WITH TRANSIT BIPARTITION AND ROUX-EN-Y GASTRIC BYPASS IN THE BIPASS STUDY

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Background

BIPASS is a French prospective multicentric randomized study (NCT04915014) that began in July 2021, evaluating the effectiveness and safety of Sleeve Gastrectomy with Transit Bipartition (SG+TB) versus Roux-en-Y Gastric Bypass (RYGB).

Objectives

The goal of this research was to report on any postoperative complication that occurred from the start of enrollments to February 2023.

Methods

For each patient who had been recruited and had a postoperative issue, an adverse event sheet was prospectively filled out. The kind of complication, Clavien-Dindo severity rating, therapy administered, and evolution were the data of interest. Each investigator gathered data, which they were then forwarded to the sponsor for control.

Results

Between September 2021 and February 2023, 194 individuals were recruited in the clinical study across 19 participating French institutions. Randomized patients were split into two groups: SG+TB (n=98) and RYGB (n=96). Due to preoperative infectious episodes, 2 patients from the RYGB group have not yet had surgery. The median follow-up duration after surgery was 10.5 months. Postoperative issues occurred in 11 patients (5.7%): 6 in the SG+TB group (6.1%) and 5 in the RYGB group (5.3%). Two patients (2%) in the SG+TB group had grade I or II complications, and 4 patients (4.1%) had grade IIIb complications: 1 jejuno-ileal anastomosis leak, 1 jejuno-ileal anastomosis stenosis, 1 obstructive pyelonephritis, and 1 umbilical abscess in a patient who had concomitant umbilical hernia repair. Grade I or II complications occurred in three patients (3.2%) in the RYGB group, while two individuals had grade IIIb or IV complications (2.1%). In this group, there was one jejuno-jejunal anastomosis stenosis and one leak on the remnant stomach. There was no mortality during the follow-up period. There was no significant difference between the two groups in terms of the overall rate of complications (p=0.81) or the rate of grade III or above complications (p=0.43).

Conclusion

This preliminary study shows that the overall rate of complications is low in both groups with no significant differences between the 2 techniques.

O-227

PREOP PREP: HAS PREOPERATIVE WEIGHT LOSS INDICATION BECAME OBSOLETE?

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Background

Laparoscopic techniques for bariatric surgery are increasingly popular as a treatment for obesity. Previous studies on both laparoscopic and open surgical techniques have shown that acute preoperative weight loss is associated with better post-surgical weight loss outcomes.

Objectives

The study aimed to determine if preoperative weight loss is associated with better weight loss outcomes in patients undergoing Roux-en-Y gastric bypass or sleeve gastrectomy using laparoscopic techniques.

Methods

A descriptive, cross-sectional, retrospective, and quantitative study was conducted in two hospitals in Minas Gerais, Brazil, with 85 patients who underwent bariatric surgery. The majority of patients were female (87%), aged between 35 and 45 (55,2%), with a baseline BMI of 42,9. Data was collected from patient medical records from the first appointment to 12 months after surgery. We compared the weight of the first preoperative consultation, weight on the day of surgery, and post-surgical weight loss after 12 months. Patients were divided into groups that lost weight before surgery, those who maintained their weight, and those who gained weight before surgery. Kruskal-Wallis test was used to verify the statistical significance level.

Results

Among 85 patients included in the study, 18 (21,1%) lost weight before surgery, 31 (36,4%) maintained their weight, and 36 (42,3%) gained weight before surgery. We found no significant differences between the three groups when comparing weight loss after surgery. Despite all patients receiving the same medical guidance and access to multidisciplinary assistance for weight loss, they all struggled with preoperative weight loss.

Conclusion

The study suggests that there may not be a significant link between losing weight before laparoscopic bariatric surgery and better post-surgery outcomes. It is crucial to investigate alternative strategies for improving post-surgical outcomes, such as increased social support and more frequent follow-up appointments. However, further studies with larger sample sizes are required to establish the definitive link between preoperative weight loss and post-surgical outcomes. Patients should not be discouraged if they cannot lose weight before surgery, but it is still essential to encourage weight loss to prepare them psychologically for a modified diet and to improve their anatomical condition, such as reducing fatty liver disease.

O-228
PREOPERATIVE GLP-1 THERAPY IN INDIGENOUS PATIENTS UNDERGOING MULTIDISCIPLINARY BARIATRIC CARE

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Introduction

Preoperative optimization before bariatric surgery remains an important part of multidisciplinary care and preoperative weight loss is associated with improved outcomes after surgery. This can include dietary and lifestyle modification before surgery. The goal of this study is to evaluate the preoperative weight loss of Indigenous patients who were placed on GLP-1 therapy through a multidisciplinary program prior to bariatric surgery.

Methods

Preoperative care of Indigenous patients who underwent bariatric surgery from June 2021 to August 2022 in a comprehensive bariatric program were included. Retrospective chart review was performed, and patients who were placed on GLP-1 therapy (GT) were compared with patients who were not placed on GT. Rates of Diabetes, Hypertension, BMI, obesity associated comorbidities, preoperative weight loss, and operative intervention were compared between patients given GT versus standard multidisciplinary care.

Results

A total of 38 patients were included in this study, and all patients had dedicated Obesity Medicine evaluation. 19 patients were treated with GT, and 19 patients did not have GT. Rates of obesity associated comorbidities in each group are displayed in table 1. The mean weight of patients who had GT was 156.6 kg (106.7-275.7), and 132.7 kg (91.6-207) in patients without GT. Patients with GT had a mean weight loss of 13.2 kg before surgery and patients without GT had a mean weight loss of 7.69 kg before surgery (p=0.05).

Table 1. Patient comorbidities with use of GLP-1 therapy and no GLP-1 therapy.

Comorbidity	GT	No GT
Diabetes Mellitus	12 (63%)	9 (47%)
Hypertension	13 (68%)	12 (63%)
Obstructive Sleep Apnea	10 (53%)	7 (37%)
Dyslipidemia	4 (21%)	9 (47%)

Abbreviations: GT: GLP-1 Therapy.

Discussion

Indigenous patients undergoing bariatric surgery have high rates of diabetes mellitus, hypertension, and obstructive sleep apnea. Patients who have pre-operative GT have greater pre-operative weight loss than patients without GT. GT can be considered in patients with and without diabetes mellitus prior to bariatric surgery to facilitate preoperative weight loss. Additional data regarding GT in patients with a range of BMI on presentation to bariatric programs can guide which patient populations benefit from use of this therapy before surgery.

O-229

PREOPERATIVE LIFESTYLE IMPROVEMENT AND PSYCHOLOGICAL TESTS ARE PREDICTORS OF EARLY WEIGHT LOSS AFTER SLEEVE GASTRECTOMY

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Purpose

This study investigated the associations of preoperative lifestyle improvements and psychological tests with early weight loss after sleeve gastrectomy.

Methods

This was a single-center, retrospective study of 57 patients who underwent preoperative lifestyle intervention with a multidisciplinary team approach based on cognitive behavioral therapy before sleeve gastrectomy. All patients underwent preoperative psychological testing with the Neuroticism-Extraversion-Openness Five-Factor Inventory (NEO-FFI) and the Tokyo University Egogram New Version II (TEG II). We investigated the associations of lifestyle improvements and psychological testing results with percent total weight loss (%TWL) one year after surgery.

Results

The median %TWL at 1 year was 38.2% for patients with an improved lifestyle and 26.9% for those without improvement ($P = 0.0008$). Although TEG II factors were not associated with %TWL at 1 year, higher NEO-FFI extraversion (E) scores were significantly associated with a better %TWL at 1 year. The median %TWL at 1 year was 35.2% for patients with higher E scores and 25.4% for those with lower E scores ($P = 0.0247$). Lifestyle improvement and the NEO-FFI E score significantly influenced %TWL at 1 year based on a logistic regression analysis.

Conclusion

Preoperative lifestyle improvement and the NEO-FFI E score may be predictors of early weight loss after sleeve gastrectomy.

O-230
PREOPERATIVE VITAMIN D REPLETION STRATEGIES IN BARIATRIC-METABOLIC SURGERY: A SYSTEMATIC REVIEW

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Background

Although preoperative vitamin D deficiency rates are reported as up to 90% among bariatric-metabolic surgery candidates, evidence on optimal preoperative repletion strategies to guide practice is lacking.

Objectives

To determine the effect of preoperative vitamin D deficiency repletion strategies on pre- and postoperative vitamin D status and adverse event rates among bariatric-metabolic surgery candidates.

Methods

A systematic review searching four databases was conducted in August 2022 to synthesise interventional or observational studies that delivered preoperative vitamin D to metabolic-bariatric surgery candidates via oral, intravenous, or intramuscular (IM) routes. Eligible studies were critically appraised, and the GRADE approach evaluated confidence in findings.

Results

From 10,926 search results, 14 studies (n=21 repletion groups: n=8 from n=4 interventional studies and n=13 from n=10 observational studies) reported preoperative repletion of vitamin D, with 10 of 14 studies analysing the results before and after the intervention/surgery (Table 1). Quality was moderate (n=2 positive; n=12 neutral). All n=21 groups reported improved 25OHD levels. One of four studies measuring adverse events reported mild-moderate symptoms related to supplement use.

Conclusion

All preoperative vitamin D repletion strategies improved 25OHD levels. The strongest evidence was moderate certainty that preoperative vitamin D oral supplementation for 7-8 weeks improved 25OHD levels.

Table 1. Effect of preoperative vitamin D repletion strategies according to type of intervention (n=17 repletion groups from 10 studies).

Groups, Design	Mega-dose	Chronic dose	Multi-Vitamin (chronic)	Delivery, duration	Increased 25OHD levels post-intervention/surgery	Decreased deficiency rates post-surgery	Quality	GRADE
1, Interventional	300,000 IU	-	-	IM, single day	n = 1/1 groups	-	1/1 +	Not applied
1, Interventional	150,000 IU	50,000 IU	-	Combined IM and oral, 7 weeks	n = 1/1 groups	-	1/1 +	Not applied
6, Interventional	-	1,200-50,000 IU	0-400 IU	Oral, 7-8 weeks	n = 6/6 groups	-	2/4 + 2/4 ø	Moderate
7, Observational	-	1,000-50,000 IU	0-600 IU	Oral, 4-12 weeks	n = 6/6 groups	n = 1/1 groups	5/5 ø	Very low
2, Observational	-	0-100,000 IU	500 IU	Multi-vitamin +/- oral, 12 weeks	n = 2/2 groups	n = 1/2 groups	1/1 ø	Not applied

O-231

PRE-OPERATIVE WEIGHT LOSS IS NOT A PREDICTOR OF WEIGHT LOSS AFTER BARIATRIC SURGERY

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Background

Mandatory pre-operative weight loss is often required as admissibility criteria for bariatric surgery. Some authors propose that pre-operative weight loss is associated with patient compliance to dietary and lifestyle interventions, which are paramount in the management of obesity. However, there is no hard evidence confirming that pre-operative weight loss is related to the magnitude of post-operative weight loss. On the other hand, refusing bariatric surgery to patients who are unable to lose weight pre-operatively might exclude patients who need the most the surgically induced weight loss.

Objectives

In this preliminary study we try to analyze if pre-operative weight change is associated with post-operative weight loss after bariatric surgery.

Methods

Retrospective analysis of 198 patients treated in a Portuguese Community Hospital between January 2018 and September 2021. Statistical analysis was performed with SPSS v. 28 and p-values <0.05 were considered significant. Patients were analyzed regarding anthropometric data, weight change between the first outpatient visit and the day of the surgery and post-operative weight change.

Results

Most patients were female. The mean BMI was 43.1 kg/m². The most frequent surgery was gastric bypass (56.6%) followed by gastric sleeve (37.4%). Upon the first dietitian consultation, patients were proposed dietary optimization. Pre-operative weight loss was recommended but not required for surgery. In this period, 50% of the patients increased their weight and only 22.2% had a significant (>2kg) weight reduction. The 1 month %EWL was 26% and the 12 months %EWL was 81.5% and were not statistically different according to pre-operative weight change. Patient with pre-operative weight loss had significantly lower BMI (40.5 vs 44.5; p=0.03) at the day of surgery, although their maximum BMI was not different. After adjustment for initial BMI and type of surgery, pre-operative weight change was not related with 1 month and 12 months weight loss (p=0.9).

Conclusion

Mandatory pre-operative weight loss is not associated with post-operative weight loss and might exclude patients who are the most in need of surgical treatment.

O-232
PREVALENCE AND RISK FACTORS OF MIGRAINE IN A CLINIC-BASED SAMPLE OF PATIENTS PURSUING SURGICAL OR MEDICAL TREATMENT FOR OBESITY

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Background

Migraine is a debilitating neurological disease characterized by moderate-to-severe headache and associated clinical features (e.g., nausea, light sensitivity) that affects 12% of the adult population and women three times more than men. Previous research indicates obesity is both a risk and exacerbating factor for migraine and that migraine improves after obesity treatments, including metabolic and bariatric surgery (MBS). However, little is known about prevalence of migraine in patients pursuing different treatments for obesity.

Objectives

This study is the first to assess: (1) prevalence of migraine in patients with severe obesity pursuing MBS or medical treatment for obesity; and (2) associations between sociodemographic, anthropometric, psychological, and disease factors and migraine risk.

Methods

Participants (80% female; 28.8±13.7 years old, BMI=43.1±9.1 kg/m²) pursuing MBS (n=276) or medical treatment for obesity (n=316) completed the 3-item ID Migraine, a validated self-administered screener for migraine that asks patients about how frequently headaches limit their activities and the presence of migraine clinical features (i.e., nausea and light sensitivity). Participant sociodemographic (e.g., age, sex) and anthropometric (i.e., weight, BMI) characteristics, vital signs (heart rate, blood pressure) and comorbidities (depression, anxiety disorder, sleep apnea, cardiometabolic disease, and other pain conditions [e.g., fibromyalgia]) were retrieved from electronic medical records. Multivariate logistic regression evaluated associations between the above factors and odds of having migraine.

Results

Of 592 participants, 166 (28%) were identified as having probable migraine based on the ID Migraine. The odds of having migraine were increased with: female sex (OR=2.76, *p*<.001), depression (OR=2.04, *p*<.001), being in the medical weight loss program (OR=1.77, *p*=.008), and younger age (OR=1.03, *p*=.016).

Conclusion

In this sample of nearly 600 patients pursuing MBS or medical treatment for obesity, migraine prevalence was more than 2 times higher than in the general population. Being female and having depression were the strongest contributors to increased risk of migraine. Findings warrant: multimodal treatment approaches involving collaborations between obesity and headache specialists to optimize migraine screening and treatment in patients with obesity; and additional prospective studies to determine whether magnitude of changes in migraine differ after MBS and medical treatment for obesity.

O-233

PREVALENCE OF NUTRITIONAL DEFICIENCIES: PRE AND POST BARIATRIC METABOLIC SURGERY AMONG THE INDIAN POPULATION

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Background

Nutritional deficiencies and obesity are both major health concerns in India, and bariatric surgery is one of the most effective treatments for obesity. Therefore, pre-and-post-surgery nutrition care is critical for the success of bariatric surgery and should be tailored to each patient's individual needs.

Objective

Assessment of the pre-and post-surgery nutritional status of the Indian population with Obesity undergoing bariatric surgery to optimise pre-and-post-operative nutrition care.

Methods

All assessments are done by our institute's Bariatric Nutritionist. Pre-and-post-operative nutritional status was collected and recorded, including haemoglobin, total protein, albumin, calcium, vitamin B12, vitamin D3 and dietary restrictions. Age, gender, and body mass index (BMI) were also collected. A review and analysis of these data are presented.

Results

11,607 patients were evaluated who underwent bariatric surgery at our institute. 50% were females, and the average age was 43.1 ± 12.6 years. Pre-operative mean weight was 118.00 ± 24.9 kg with a BMI of 43.5 ± 8.9 kg/m². 42.9% of patients were non-vegetarian, consuming eggs or animal food once a week. Vitamin B12 deficiency was documented in 69.9% and 24.2%, low Hgb in 8.8% and 7.8%, low albumin in 10.9% and 5.5%, low protein in 10.2% and 4.7%, low calcium in 41.6% and 11.5%, and vitamin D3 deficiency in 59.3 and 11.2% patients at pre-and-post-surgery, respectively. The incidence of the weaknesses was higher in females. Significant nutritional deficiencies were corrected before and after the surgery.

Conclusion

There is a significant prevalence of nutritional deficiencies among individuals, both pre-and post-surgery, among the Indian population. A multidisciplinary team approach involving surgeons, nutritionists, and other healthcare providers is necessary to achieve successful outcomes. A standardised protocol for evaluation should be used for the Indian population with obesity undergoing bariatric surgery to optimise perioperative nutrition care.

Keywords: Nutrition care, Bariatric surgery, Perioperative, Indian population with obesity.

O-234

PREVALENCE, INDICATIONS, AND COMPLICATIONS OF CONVERSIONAL SURGERY AFTER VERTICAL BANDED GASTROPLASTY: A MBSAQIP ANALYSIS

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Background

Vertical banded gastroplasty (VBG) was the most popular bariatric procedure in the 1980's. However, it was largely abandoned due to the poor long-term weight loss and band-related complications including stomal stenosis, ulceration, and gastroesophageal reflux disease (GERD). However, there remain patients with VBG anatomy who require revision or conversion to another bariatric procedure.

Objectives

To determine the prevalence, indications, rate of serious complications, and mortality of conversional surgery after VBG.

Methods

This was a retrospective study of the MBSAQIP database, which includes 30-day outcomes from 902 centers. Individuals undergoing conversional or revisional surgery after VBG were included. Data was limited to 2020 and 2021, as these years included important details in revisional cases. Serious complications included cardiac complications, pneumonia, renal failure, reoperation, reintervention, deep surgical site infection, wound disruption, stroke, venous thromboembolism, leak, and hemorrhage.

Results

A total of 486 VBG conversions occurred, which were comprised of RYGB (428, 83.5%), SG (41, 8.4%), single anastomosis gastric bypass (4, 0.8%), biliopancreatic diversion with duodenal switch (3, 0.6%), and other (10, 2.1%). The mean age at conversion was 56.5 ± 9.4 years, mean body mass index was 43.6 ± 9.6 kg/m² and 92.0% were female. The most common indications for conversion were weight recurrence (32.7%), GERD (21.6%), inadequate weight loss (16.3%), dysphagia (7.4%), and stenosis or obstruction (7.2%). Operative time for revision was significantly longer for RYGB compared to SG (223.6 vs 132.3 minutes, $p < 0.001$). Serious complications occurred more commonly following RYGB compared to SG, although not statistically different (15.7 vs 7.4%, $p = 0.152$). This consisted of a high rate of leak (3.7% RYGB vs 4.9% SG, $p = 0.717$), hemorrhage (4.2% RYGB vs 2.4% SG, $p = 0.584$), reoperation (7.7% RYGB vs 2.4% SG, $p = 0.214$), and deep surgical site infections (4.4% RYGB vs 4.9% SG, $p = 0.897$). Thirty-day mortality was 1.2% for RYGB and 0% for SG ($p = 0.487$).

Conclusions

Conversional surgery after VBG is uncommon with only 486 procedures reported. Despite advances in surgical technique, the rate of complications and mortality in conversional procedures after VBG remains high. Prior to undergoing conversion from VBG, patients should be informed about these risks.

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PULMONARY FIBROSIS DUE TO SILENT ASPIRATION AFTER ONE-ANASTOMOSIS GASTRIC BYPASS: A CASE REPORT

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Background

The one-anastomosis gastric bypass (OAGB) is an established procedure and now the third most commonly performed bariatric metabolic surgery worldwide. Although results concerning weight loss and reduction of comorbidities are excellent, gastro-esophageal (bile) reflux is a common complication after OAGB and revision to Roux-en-Y gastric bypass (RYGB) is frequently performed in case of clinical symptoms.

Objectives

To raise awareness of the rare complication of new onset of interstitial lung disease due to recurrent bile reflux after OAGB.

Methods

Here we present a case of a 47-year-old woman, who developed pulmonary fibrosis due to silent aspiration, 7 years after primary OAGB.

Results

The patient presented to the pulmonology department after experiencing hemoptysis and increasing dyspnoea. CT-scan showed ground-glass opacities. Immunological or other primary pulmonary diseases were excluded, but a subsequent CT scan showed progression of disease. Bronchoscopy was performed and abundant bile was found in the trachea and bronchi. The histological work-up showed peribronchiolar fibrosis. The patient was presented to the bariatric metabolic surgery department, describing reflux symptoms in the past but without any signs of regurgitation or aspiration. Prioritized conversion to RYGB was planned immediately. At postoperative follow-up the patient reported complete resolution of subjective reflux symptoms and improvement of dyspnoea. 6 months after the surgery the CT-scan showed decrease of the ground-glass areas.

Conclusion

To the best of our knowledge this is the first reported case of pulmonary fibrosis causally associated with bile acid reflux after OAGB. As rates of reflux after OAGB might be higher than reported in the literature, it is important to raise awareness of potential silent aspiration of bile. We suggest, to extend diagnostic examinations in patients experiencing dyspnoea with OAGB in their history to find and treat potential bile aspiration as early on as possible.

O-236

PYRRHIC VICTORY? LONG TERM RESULTS OF BILIOPANCREATIC DIVERSION IN TYPE 2 DIABETES PATIENTS WITH SEVERE OBESITY

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Background

In type 2 diabetes (T2DM) with severe obesity, the very long-term results after biliopancreatic diversion (BPD) are still on debate.

Objective

Retrospective evaluation of the metabolic and clinical conditions T2DM patients at long-term following BPD.

Setting

University Hospital.

Methods

173 T2DM patients with severe obesity investigated prior to and at 3-5 and 10-20 years after BPD. Throughout follow-up, anthropometric, biochemical, and clinical findings data were considered. The long-term data were compared with those of a cohort of 173 T2DM patients with obesity treated with conventional therapy.

Results

In most operated patients T2DM resolved within the first postoperative phases, and at long and very long-term the fasting blood glucose (FBG) remained above the normal range only in 8% of the cases. Likewise, a stable improvement of blood lipid pattern was observed (follow-up rate 63%). On the contrary, in the not operated patients, the glucose and lipid metabolic parameters remained in the pathological range at long-term in all cases. In the BPD group, a very high number of severe BPD-related complications were recorded, and 27% of the BPD patients died, while in the controls the 87% of the subjects were still alive at the end of the follow up period ($p < 0.02$).

Conclusions

Despite the high T2DM stable resolution rate and the normalization of most metabolic data at ten-twenty years following the operation, these results indicate that BPD should be indicated with caution in the surgical treatment of T2DM in patients with severe obesity.

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RANDOMIZED CONTROL TRIAL COMPARING OUTCOMES OF ENHANCED RECOVERY AFTER BARIATRIC SURGERY (ERABS) PROTOCOL IN ROUX-EN Y GASTRIC BYPASS (RYGB) PATIENTS IN INDIAN SUBSET OF PATIENTS

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Background

Enhanced recovery after surgery (ERAS) pathways comprises of a series of peri-operative, multidisciplinary, evidence-based interventions that were developed initially for elective colorectal surgery. After acceptance of Enhanced Recovery Pathways in various surgical specialties, they concluded that applying the ERAS protocol led to significant difference in the length of hospital stay. Yet, only a few studies have been published to prove its validity and importance in Roux-en Y Gastric bypass surgery (RYGB).

Objectives

Our study aims to prospectively investigate the effectiveness and safety of an ERAS protocol for Roux-en Y Gastric bypass surgery (ERABS) in Indian population with obesity.

Materials and Methods

This is a single centre-blinded randomized control trial involving 141 patients who underwent laparoscopic roux en Y Gastric Bypass (RYGB) over a period of one year. Randomization was done with the help of computer generated randomization and patients were allocated to ERAS or Standard protocol group. The primary outcome was the length of hospital stay, while the secondary outcomes included were pain score; postoperative nausea, and vomiting (PONV); need for rescue analgesia; return of bowel activity, any complications and patient satisfaction score.

Results

Of 141 patients included, 70 were allocated in the ERAS group, and 71 were included in the standard pathway group. We found no significant differences in the baseline characteristics between the two groups. Mean hospital stay was significantly lower in the ERAS group compared to the standard group ($p = 0.033$). In comparison to the standard group, ERAS patients had early resumption of bowel activity assessed by bowel sounds ($p < 0.010$) and passage of first stool after surgery ($p < 0.011$). Pain scores between the two groups showed a significant difference during the 4th hour and 8th hour. There was statistically significant lower Post operative Nausea and Vomiting (PONV) in the ERAS group ($P < 0.0001$). Both protocols had comparable complication rates.

Conclusion

Patients who followed ERAS protocol were found to have shortened hospital stay, decreased pain, early resumption of bowel activity, decreased post operative nausea and vomiting, reduced need for analgesia and better patient satisfaction score.

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READMISSION AND REOPERATION RATE AFTER LAPAROSCOPIC VERSUS ROBOTIC-ASSISTED BARIATRIC-METABOLIC SURGERY, SHOULD WE STILL EXPECT TO GET BETTER?

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Background

Robotic surgery is becoming increasingly popular in the field of bariatric-metabolic surgery. However, its superiority in terms of postoperative outcomes compared to conventional laparoscopy has not been clearly proven. With the growing adoption of robotic surgery and improved technologies, its benefits may become more evident.

Objectives

To evaluate the readmission and reoperation rates after bariatric-metabolic surgery performed by conventional laparoscopy versus robotic-assisted from 2015 to 2021.

Methods

The Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP®) database was reviewed for primary bariatric operations (proximal and distal Roux-en-Y gastric bypass, Sleeve gastrectomy, adjustable gastric band, biliopancreatic diversion with duodenal switch) performed with conventional laparoscopy versus robotic-assisted. Cases with missing data were excluded. A propensity score-matched sample was constructed with matching for age, body mass index, race, operation type, comorbidities, American Society of Anesthesiology (ASA) score, and previous surgery. Logistic regression was performed to compare binary outcomes, while Wilcoxon's matched-pairs signed-ranks test was conducted to assess continuous outcomes.

Results

From 2015 to 2021, 1,083,082 cases met the inclusion criteria. Among them, 943,452 (87%) were conventional laparoscopic bariatric-metabolic surgeries which were matched 1:1 with robotic-assisted cases (139,630). Reoperation, readmission, emergency room visits and cumulative hospital days at 30 days postoperatively were significantly higher for robotic-assisted cases (OR(95%) 1.22(1.15-1.30), $p < .0001$; OR(95%) 1.21(1.17-1.26), $p < .0001$; OR(95%) 1.29(1.19-1.40), $p < .0001$; OR(95%) 1.14(1.08-1.21), $p < .0001$ respectively). Robotic-assisted cases had a higher cumulative morbidity rate (OR(95%) 1.09(1.06-1.13), $p < .0001$) with a similar mortality rate (OR(95%) 0.96(0.75-1.22, $p = 0.7130$) at 30 days postoperatively when compared to conventional laparoscopic cases. When considering only cases between 2020 and 2021, similar results were observed, with the exception of emergency room visits, which showed no difference between the two groups (OR(95%) 0.95(0.84-1.06), $p = 0.3445$).

Conclusion

Our results show a higher readmission and reoperation rate and higher cumulative morbidity at 30 days postoperatively in robotic-assisted bariatric-metabolic surgery compared to conventional laparoscopy. Analyzing only the cases performed between 2020 and 2021, robotic surgery also does not show superiority over conventional laparoscopy.

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REDO ENDOSCOPIC SLEEVE GASTROPLASTY (RE-ESG): THE EXPERIENCE OF A TERTIARY CENTER

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Background and Objectives

Obesity is a chronic relapsing multifactorial disease. As such, a “one and done” strategy may not lead to satisfying results in the long term for both surgical and endoscopic procedures. Endoscopic Sleeve Gastroplasty (ESG) is an effective, safe and repeatable bariatric procedure. As loss of satiety with weight regain or insufficient weight loss may occur after a primary ESG, re-ESG may play a role in such patients to improve weight loss. In this case series, we evaluate the short and medium-term outcomes of the re-ESG.

Methods

A retrospective analysis was performed on a prospective database including patients who underwent ESG between March 2017 and September 2022; patients who received a re-ESG because of progressive loss of satiety, insufficient weight loss and weight regain $\geq 50\%$ after primary ESG were included in the analysis. %EWL, %TBWL, and the Bariatric Analysis and Reporting Outcome System (BAROS) questionnaire were assessed during follow-up. Weight loss parameters were calculated both after re-ESG and overall.

Results

Of 406 patients that underwent ESG, twenty-seven required a re-ESG (6.7%). The mean time between the primary ESG and the re-ESG was 20 months (range 7-42). Re-ESG was technically feasible in all patients and no periprocedural adverse events occurred. The mean BMI was 38.4 ± 6.5 kg/m² and 35.5 ± 6.0 kg/m² at primary ESG and re-ESG, respectively. The overall mean %TBWL was $18.2\% \pm 8.1$ and $18.7\% \pm 6.2$ at 6 and 12 months, respectively. The mean %TBWL after re-ESG was $10.3\% \pm 6$ at 1 month, $13.2\% \pm 6.4$ at 3 months, $13.6\% \pm 7.7$ at 6 months, $14.1\% \pm 7.5$ at 12 months. More details on weight loss and quality of life (QoL) outcomes are summarized in Table 1. All patients reported a proper sense of satiety and substantial improvement in QoL after the re-ESG.

Conclusions

Re-ESG has satisfying short and medium-term outcomes in terms of satiety, weight loss and QoL. As such, repeating ESG should not be seen as a failure, but a further step in the endoscopic approach to obesity.

Table 1. Weight loss and quality of life outcomes after re-ESG				
	1 month	3 months	6 months	12 months
Overall %TBWL	15.2% \pm 8.0	19.0% \pm 8	18.2% \pm 8.1	18.7% \pm 6.2
Re-ESG %TBWL	10.3% \pm 6	13.2% \pm 6.4	13.6% \pm 7.7	14.1% \pm 7.5
Overall %EWL	47.1% \pm 21.3	57.1% \pm 21.9	53.8% \pm 21.9	55.5% \pm 18.5
Re-ESG %EWL	38.0% \pm 17.2	47.4% \pm 21.7	46.2% \pm 22.1	47.8% \pm 24.9
BAROS score	3.6 \pm 1.5	4.2 \pm 1.6	4.2 \pm 2.0	4.1 \pm 1.8
Values are mean \pm standard deviation.				

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REDUCING GREENHOUSE GAS EMISSIONS IN A EUROPEAN BARIATRIC SURGERY UNIT: WHY AND HOW?

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Purpose

Obesity is a growing issue worldwide, whose causes and consequences are linked to the environment. On the other hand, many procedures in surgical suites entail environmental consequences and could be subject to improvements in this regard. Obesity surgery partakes in this.

Material and Methods

We conducted a prospective comparative study on two groups of bariatric interventions (N = 59 and 56, respectively) during two consecutive periods of time, first without and then with specific measures aimed at reducing greenhouse gas emissions related to bariatric procedures by approximately 10%.

Results

These measures included recycling of disposable surgical equipment, minimizing its use, and curbing anesthetic gas emissions.

Conclusion

Further and continuous efforts/incentives are warranted, including reframing the surgical strategies. Instead of comparing measurements, which is difficult at the present time, we suggest defining an ECO-SCORE in operating rooms, among other healthcare facilities.

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REDUCTION OF OPIOID CONSUMPTION AFTER THE IMPLEMENTATION OF ENHANCED RECOVERY AFTER SURGERY (ERAS) PROTOCOL TO AN ESTABLISHED BARIATRIC SURGICAL PROGRAM

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Background

ERAS is an evidence-based, multimodal approach to perioperative care that aims to improve postoperative outcomes and reduce hospital stay for surgical procedures including bariatric surgery. Bariatric surgery is a complex procedure with potential complications and long hospital stays. The adoption of ERAS protocols in bariatric surgery has been shown to significantly reduce the length of hospital stay and enhance patient outcomes (1).

Objectives

To determine if outcomes such as length of stay, amount of opioid administration and ambulation improved post implementation of an ERAS protocol in our bariatric surgical program.

Methods

A retrospective, observational study was conducted to evaluate implementation of ERAS protocols in 2020 and compare opiate use, ambulation, and LOS versus those of traditional care (TC) patients preceding ERAS protocol in 2019 at South Miami Hospital, a community-based hospital in Miami, FL, USA. Patients underwent laparoscopic Roux-en-Y gastric bypass (RYGB) or sleeve gastrectomy (VSG) by four different surgeons in our established bariatric program.

Results

One hundred forty-five patients each for the ERAS and TC group, for a total of 290 patients, were compared with a mean similar age, 41 and 46, and mean BMI of 42 and 44 kg/m², respectively. The most common procedure performed was gastric sleeve (79.2%), followed by gastric bypass (19.7%). Differences among groups included reduction of opiate administration on day 1 by 40.2% (69.7% TC vs. 41.8% ERAS; $p < 0.001$). Patients were also ambulating 1h earlier in the ERAS group. Though LOS only improved by 1.5 hours in the ERAS group, our gastric bypass ERAS cohort LOS reduced by 11h across all surgeons.

Conclusion

Our implementation of the ERAS protocols has shown to be effective in improving patient outcomes in bariatric surgery, especially opioid administration. The gastric bypass cohort seemed to benefit mostly in reduction in LOS. Employment of ERAS protocols require a multidisciplinary team approach and commitment from healthcare providers, patients, and caregivers. ERAS protocols are an important tool in optimizing perioperative care in bariatric surgery.

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O-242

REFRACTORY PAIN POST ROUX-EN Y GASTRIC BYPASS: DEFINING A MANAGEMENT STRATEGY

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Introduction

Refractory pain post laparoscopic Roux-en Y Gastric Bypass (RYGB) is a challenging and often frustrating problem for both the patients and clinicians with no clear management strategy currently available to guide practice. This study evaluates outcomes from patients with post gastric bypass pain to better define a standardisation model of management from which to base future work.

Methods

Patients identified from electronic records over a 12-year period (2009-2021) as having refractory pain post RYGB from a single unit were included in the study. Data including demographics, aspects of the pain, relevant co-morbidities and outcomes from all investigations were evaluated. Patients were provided with a validated questionnaire to enable subjective evidence on their pain.

Results

1297 patients who underwent a RYGB were included in the study. 103 patients presented with refractory post RYGB pain (8%), of which 82 were female (80%). The mean BMI was 44 kg/m². Overall, a mean weight loss of 40kgs (BMI of 31kg/m²) was achieved. 93% had no abdominal pain prior to the RYGB. Pain was post-prandial in 97% of cases with the site of pain varying. Investigations carried out included: Gastroscopy, Contrast fluoroscopy meal, contrast CT Abdomen, Ultrasound abdomen, Hydrogen breath test and Diagnostic laparoscopy; repeated in 75% of cases, with a cause identified and treated in 33 cases (32%). All patients were reviewed by psychologists / psychiatrists.

Conclusion

The importance of a rigorous psychological and medical pre-assessment to highlight at risk patients preoperatively. The management requires a full 360 degree MDT approach to exclude organic causes but also evaluation from Dieticians, Gastroenterologists and Psychologists before a referral to a chronic pain specialist or considered for a reversal of the bypass.

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RELATIONSHIP BETWEEN FOOD AND EATING BEHAVIORAL PROBLEMS AND CLINICAL OUTCOMES IN ADULTS WHO ELECTED THE LAPAROSCOPIC SLEEVE GASTRECTOMY

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Background

Food and eating behavioral problems (FEBPs) including poor cooking skills and binge, grazing, and emotional eating are strongly linked to weight gain. Better understanding of FEBPs experienced by laparoscopic sleeve gastrectomy (LSG) patients and their association with postoperative outcomes in the real-world setting is required to guide multidisciplinary team support.

Objectives

Explore the association between the number and type of FEBPs routinely identified by healthcare professionals with postoperative weight loss, micronutrient deficiencies, and events in adults who elected an LSG.

Methods

An observational cohort study recruited LSG patients from one site in Australia. FEBPs documented by dietitians, nurses, or psychologists were observed from medical records. FEBPs were tested for association with outcomes at 6- and 12-months using SPSS. Outcomes were excess weight loss (EWL), micronutrient deficiencies, and events (defined as symptoms, side-effects, or adverse events triggering clinical support).

Results

215 patients were recruited (median BMI:40.9 [IQR: 37.0-45.0] kg/m²; female: 77.7%; mean age 41.4 [SD:9.5] years). Twenty types of FEBPs were identified with mean 6.4 (SD:2.1) FEBPs per patient. The most common FEBPs were large portion sizes (91.6%), emotional eating (62.8%), irregular meal patterns (61.4%), and night eating (49.8%). EWL was median 60.4 (IQR: 48.3-76.1)% and 81.1 (IQR: 65.8-101.2)% at 6- and 12-months, respectively. 24.6% and 63.6% of patients had one or more micronutrient deficiencies at 6- and 12-months, respectively. There was a median of 4.0 (IQR:2.0-5.0) events per patient which were mostly mild gastrointestinal symptoms (89.3%) between day-of-surgery and 6-months post-surgery (86.1%), e.g., constipation, nausea, reflux. FEBPs were not associated with weight loss nor micronutrient deficiency. Night eating was associated with higher frequency of gastrointestinal events at 6-months ($p<0.001$), surgical or medical events at 6-months ($p=0.002$), and nutrition-related events at 6- and 12-months ($p=0.005$ and $p=0.008$, respectively).

Conclusion

Australian adults who elected an LSG experienced a wide variety and high frequency of FEBPs. Night eating was associated with gastrointestinal, medical, and nutrition-related events. Multidisciplinary teams supporting LSG patients should focus on behavior change to address FEBPs and ensure to address night eating behavior.

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RELIABILITY OF SEROSAL VASCULAR MARKINGS AS AN ANATOMICAL LANDMARK DURING SLEEVE GASTRECTOMY: A PROSPECTIVE OBSERVATIONAL STUDY

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Objective

Sleeve gastrectomy is a commonly performed bariatric procedure that requires accurate identification of the pylorus to avoid technical errors and ensure optimal patient outcomes. While some bariatric surgeons would measure the distance from the pylorus objectively before applying the first stapler during sleeve gastrectomy, others may subjectively estimate that distance. The aim of this observational study was to determine the consistency of serosal vascular markings in the gastric antrum as a measurement of the distance from the pylorus and their potential use as anatomical landmarks during sleeve gastrectomy.

Methods

A total of 200 consecutive patients undergoing sleeve gastrectomy were included in this study. Intraoperative measurements of the vascular markings at the gastric antrum were obtained at the beginning of the surgery.

Results

The intraoperative measurements of the serosal vascular markings were highly consistent. The use of serosal vascular markings as anatomical landmarks improved the accuracy of the measurements from the pylorus during sleeve gastrectomy.

Conclusion

The results of this study support the use of serosal vascular markings in the gastric antrum as a consistent and reliable measurement of the distance from the pylorus. The use of these markings as anatomical landmarks during sleeve gastrectomy may improve surgical accuracy and reduce the risk of technical errors. Further studies with larger sample sizes and longer follow-up periods are needed to confirm these findings.

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RESCUE SURGERY FOR GASTRIC FISTULA FOLLOWING LAPAROSCOPIC SLEEVE GASTRECTOMY. SINGLE-CENTER EXPERIENCE

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Background

Gastric fistula (GF) is the most feared complication after sleeve gastrectomy (SG) for its challenging management. Rescue surgery (RS) is indicated in case of patient instability or failure of conservative treatments.

Objectives

Evaluation of the outcome of RS for GFs following SG at a high-volume referral center.

Methods

A retrospective analysis of patients with GF after SG referred to our Institution between 2013 and 2022 was performed. Patients who underwent RS were included. Fistula characteristics, time from onset to surgery, surgery performed, and healing time have been analyzed.

Results

A total of 19 patients met the inclusion criteria, all of them were secondary referrals. Male/female ratio was 1/4. Mean age was 38 (\pm 13.1) years. Median time from SG to RS was 64 \pm 107 (3-444,1). Complex fistulas were 9, 2 were multiple, 4 were large and 4 were small. Suture repair (SR) was performed in 1 patient, RYGB in 1, RYGB with Jejunal Patch (RYGB-JP) in 6 patients, RYGB with Fistulo-Jejunostomy (RYGB-FJ) in 3, Total Gastrectomy (TG) with Roux-en-Y Esophago-Jejunostomy (RYEJ) in 8. Twelve patients needed multiorgan resection. Postoperative leak occurred in 8 (42,1%) patients: 5 of them required reoperation and 3 were managed conservatively. All the patients recovered with a median healing time of 38 days (IR:81). Postoperative leak rate was higher (83.3% vs 30.7%) in patients who had undergone previous endoscopic stent placement. Mortality was nil.

Conclusions

RS is effective for achieving healing of GF following SG. Small GF can be treated by SR or, preferably, by RYGBP-JP, larger ones by RYGB-FJ. TG with RYEJ should be reserved to complex cases, despite it seems to shorten mean healing time compared to other procedures.

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RESOLUTION OF DIABETES WITH SWALLOWABLE BALLOON THERAPY

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Background

The Allurion swallowable Balloon process is a new way to treat obesity and type 2 diabetes (T2DM). This study aimed to assess the outcomes of the novel swallowable balloon on T2DM remission, weight loss, and adverse events in individuals with T2DM and obesity.

Methodology

We treated forty-two T2DM patients with obesity at our centre with a swallowable balloon. During the 6-month follow-up, diabetes remission was defined as HbA1c < 6.5% without T2DM medication, and diabetic improvement was HbA1c < 7.0% with decreased usage of oral diabetes medications.

Results

At six months of follow-up, 67.1% of the cohort treated with Allurion swallowable Balloon experienced diabetes remission. Improvement of diabetes without complete remission was observed in 13.8% and 19.1% of patients at 4 and 6 months (HbA1c, 6.8% 95% CI 6.5-7.0). These patients achieved diabetes control (HbA1c, 6.8% 95%CI 6.5-7.0) with decreased usage of oral diabetes medications and insulin withdrawal when previously used. Significant ($p < 0.001$) improvements in %TWL were 6.5 %, 10.1 %, 12.7%, 15.14%, 14.7%, and 14.4% at 1-2-3-4-5-6 months, respectively, noted after the insertion of the balloon. There was a significant ($p < 0.001$) resolution in diabetes-related comorbidities (75% HTN and 73.3% DLP).

Conclusion

New emerging Allurion swallowable Balloon is an effective tool to reduce HbA1c and put T2DM into remission and weight loss.

Keywords: Type 2 diabetes; Obesity; Allurion swallowable Balloon; Weight loss.

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RESULTS AFTER IMPLEMENTATION OF ERABS PROTOCOL - 779 PATIENTS

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Introduction

In bariatric surgery ERAS approach has shown shorter length of stay, without increase in peri-operative morbidity, readmission rates or mortality. In an era of resource optimization this “new way” seems to be the way to do bariatric surgery.

Objectives

Show the results after the implementation of an ERASBS program.

Methods

Retrospective analysis of 779 consecutive patients (single-group and single surgeon) who underwent to primary/revision bariatric procedures after the implementation of ERAS protocol that consisted of goal-directed patient education, specific pre- and post-operative medication regimen, early ambulation, and early oral intake. Patients were discharged on their first post-operative day if they met appropriate post-surgical goals.

Results

779 consecutive patients who underwent primary/revision bariatric procedure with ERAS protocol were included (August 2017 to March 2023).

- Females 81.5%, median age 36 years. Median BMI 44.3 kg/m²
- Sleeve Gastrectomy 619 patients (79.5%)
- Gastric bypass 121 (15.5%)
- Mini gastric bypass 39 (5%)
- Median hospital stay was 1 days
- Intra abdominal drain in 127 cases (16.3%)
- Early ambulation (within 2 hrs after surgery) 100%
- Early oral intake (ice chips within 2 hrs after surgery) 100%
- 7- or 30-day readmission rates was 1%
- Post-operative complications Clavien Dindo grade II - V 1%
- Post-operative analgesia, 82% without opioids
- Pain score at discharge 0/10
- Mortality rate was 0%

All our patients started with early ambulation, early oral intake, use of incentive spirometer and, and only 140 (18%) patients received opioid analgesia, The results impacted on the reduction of supplies and as a consequence of costs and hospital stay. Only 8 patient presented severe complications, 99% of the patients were classified as Clavien and Dindo grade I, only 5 reoperation and one rehospitalization. No mortality

Conclusion

The standardization of the steps, based work focused on the well-being of the patient. The structuring of the entire process into small interrelated mets and making it clear what each one has to do in the process results in a better evolution of the patients, a low frequency of complications, a shorter hospital stay and a better distribution of resources for the care of obesity and its related diseases.

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RESULTS OF THE SURVEY OF ERAS PERI-OPERATIVE PRACTICES AMONG BARIATRIC SURGEONS AND ANESTHESIOLOGISTS CONDUCTED BY THE IFSO ERAMBS TASKFORCE

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Background

To understand the current peri-operative practices in the IFSO community and to make recommendations on Enhanced Recovery after Bariatric and Metabolic Surgery, The IFSO ERAMBS Taskforce was commissioned in 2019 and has conducted a survey targeted towards bariatric surgeons who are members of IFSO, Anesthesiologists belonging to International Society for the Perioperative Care of the Obese Patient, and members of the ERAS Society. The survey was conducted between April and August 2022.

Objectives

To evaluate the current peri operative practices amongst Bariatric Surgeons and Bariatric anesthesiologists, in the context of Enhanced Recovery after Bariatric and Metabolic Surgery

Methods

A chosen global panel of experts in ERAS designed 53 questions to the survey. Survey monkey was used to send the set of questions, which reflect optimal peri-operative practices, to members of IFSO, IPSCOP and ERAS Society between June and August 2022. There were common questions, some questions specific to surgeons and to anesthesiologists. Responses were collected anonymously and analyzed.

Results

207 completed responses were received from Surgeons and 59 responses from the Anesthesiologists. The results, to be presented here (Tables not included in the abstract due to word count restrictions) summarize the combined responses which reflect the collective practices of all respondents. These were tabulated and conclusions were derived from the received answers by the members of the select panel.

Conclusion

It was encouraging to see the interest in ERAS practices in a subset of Bariatric professionals and to note that some important recent recommendations were being followed in selected centers. However, the results showed that the uptake of Enhanced Recovery practices was quite poor with wide variations in the IFSO community. This, in spite of the availability of evidence-based guidelines from the ERAS society since its first publication in 2016 and an update in January 2022 with further refinements. The results of the survey make a compelling case for the publication of ERAS practice guidelines by IFSO, focused and targeted towards Bariatric professionals worldwide, to improve bariatric surgical outcomes.

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REVISION OF FAILED SLEEVE GASTRECTOMY. A LESSON LEARNED

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Background

Revision of sleeve gastrectomy is often indicated for weight recurrence and/or upper gastrointestinal symptoms (GERD and/or vomiting).

Objectives

To understand which procedure is safer and most effective for the revision of failed sleeves.

Methods

614 patients underwent bariatric surgery under the same primary surgeon between April 2017 and February 2023 and all data were prospectively collected in the IFSO Registry. 112pts (18.2%) were revisions of failed bariatric procedures. 62 patients underwent revision of sleeve gastrectomy due to weight gain (45.1%), upper gastrointestinal symptoms (11.3%) or both (43.5%). All patients had a gastroscopy prior to surgery and 23 (37%) were diagnosed with hiatal hernia. 37/62 sleeves were converted to One anastomosis gastric bypass (OAGB), 25/62 to Roux-en-Y Gastric bypass (RYGB).

Results

There was no morbidity or mortality in all groups at 30 days. Hospital stay was 1-2 nights only. Length of surgery was shorter in the sleeves converted to OAGB versus RYGB, average of 96min vs 126min respectively. All patients with hiatal hernia had a suture repair at the same time of surgery (16 with OAGB and 7 with RYGB). During the follow up period, 8 (21.6%) sleeves converted initially to OAGB were subsequently reoperated for bile reflux symptoms/marginal ulcer (7 converted to RYGB, 1 laparoscopic washout for a perforated marginal ulcer). The conversion rate to RYGB for revisional OAGB is much higher than our conversion rate for primary OAGB which is 2.5% (7/280pts). One of the 25 sleeves (4%) converted initially to RYGB was re-operated for a recurrent hiatal hernia containing the whole gastric-pouch and anastomosis. BMI decreased more significantly after revision to OAGB (average of 37 to 31.7) than RYGB (average of 35 to 32.4).

Conclusion

In our experience, conversion of sleeve gastrectomy to RYGB and OAGB are equally safe. However, revisional OAGB has higher incidence of bile reflux/marginal ulcers with higher conversion rate to RYGB. Conversion of Sleeve to RYGB would be preferable as GERD and upper gastrointestinal symptoms are often associated with weight regain, but may not produce the same desirable weight loss.

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REVISION SURGERY FOR TREATMENT FAILURES OF CHRONIC LEAKS AFTER SLEEVE GASTRECTOMY

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Background

Sleeve gastrectomy (SG) is the most common bariatric surgery procedure in the world. Chronic Leak after Sleeve gastrectomy (LSG) is a serious complication that can be treated by surgery if endoscopic treatment fails. The two procedures performed in case of endoscopic treatment failure are the subtotal gastrectomy (STG) or the fistulojejunostomy (FJ).

Objective

The main objective of our study is to identify risk factors for failure of endoscopic treatment of LSG. The second objective of this work is to evaluate the early morbidity and mortality of STG compared to FJ.

Methods

All consecutive patients treated for SGL at the European Georges Pompidou Hospital in Paris France between 2004 and 2021 were included.

Results

123 patients with SGL were included, including 96 women (78%) for a mean age of 40.2 ± 11 years. Endoscopic treatment was successful for 80 (65%) of them. The factors significantly associated with the failure of endoscopic treatment were: presence of twist (OR 0.21, 95% CI [0.08-0.51]), presence of stenosis (OR 0.14, 95% CI [0.06-0.34]), diameter of fistula on the first endoscopy > 10 mm (OR 0.22, 95% CI [0.09-0.51]), duration of endoscopic treatment > 3 months (OR 0.35, 95% CI [0.15-0.81]), total number of endoscopies ≥ 5 (OR 0.8, 95% CI [0.69-0.94]). 43 patients required surgical treatment: FJ n=23 and STG n=20. STG required a shorter operating time (228 vs 286 min., $p=0.03$) and was more often performed by laparotomy (70% vs 13%, $p<0.01$). The postoperative complication rate as well as the healing rates and times were comparable..

Conclusion

Endoscopy is effective in 65% of cases for the management of SGL. Twist, stenosis and prolonged duration of treatment are associated with failure of endoscopic treatment. In this study, among the revision procedures, the STG was more often performed by laparotomy and involved a shorter operating time than the FJ. These two therapeutic approaches did not differ significantly in terms of early morbidity.

Keywords: Sleeve gastrectomy, leak, endoscopy, failure, fistulojejunostomy, subtotal gastrectomy.

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REVISIONAL BARIATRIC SURGERY PROCEDURES: 5-YEAR EXPERIENCE IN A SINGLE BRAZILIAN SRC CENTER

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Background

In the last few years, the number of reoperative procedures is rapidly increasing, as every year, more and more primary bariatric procedures are performed. Insufficient weight loss or weight regain, late-surgical complication (GERD) and malnutrition are an indication for revisional bariatric surgery.

Objectives

Reports our 5-year experience, the reason for revisional surgery, demographic profile, treatment performed (revisional surgery).

Methods

Observational study, from January 2018 to January 2023, 25 patients were submitted a revisional bariatric surgery in a SRC center in São Paulo, Brazil. They were analysed for the reason for revisional surgery: weight regain, GERD, hypoglycemia/ malnutrition. In addition gender, middle ages, the mean weight/ BMI and treatment performed.

Results

The median age was 44 years, mean BMI of $32,42 \pm 15,5$ kg/m², mean weight 91,68 kg. The surgery most indicate for revisional was Sleeve. Of the 25 patients, 14 (54,72%) patients presented as a reason for reoperation GERD (gastroesophageal reflux disease), 9 patients (36%) weight regain. Both groups had surgery converted to Y-Roux-Bypass (RYGB), 2 patients (18,72%) presented malnutrition/hypoglycemia after Y-Roux-Bypass surgery. In these cases were realized bowel transit reconstruction with duodenal inclusion (gastro-gastric anastomosis or jejunal bridge). All patients were followed up at 01 month and 06 months. In revisional surgery by GERD there was better clinic (symptoms) and endoscopic just in first moth. The patients whit follow up for 6 moths, don't file any complaints. the patients with weight regain after the first surgery undergoing revisional surgery, presented a median weight loss of 10 kg in the first month and 20 % excess weight loss in 6 months. Already the patients malnutrition/hypoglycemia had better clinic, increase in the albumin 1,8 g/dl for 3,6 in 6 months. Whit zero death rate and without surgery complications

Conclusion

The revisional bariatric surgery is indicate after fail the clinic tratament and orient interdisciplinar. It's an effective option for weight regain, GERD and malnutricion a after first surgery. It presents an acceptable morbidity/mortality rate in the best centers of excellence in bariatric and metabolic surgery.

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REVISIONAL BARIATRIC SURGERY: CONVERSION FROM SLEEVE GASTRECTOMY TO ROUX-EN-Y GASTRIC BYPASS, CAUSES AND RESULTS IN OUR SERIES

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Background

Revisional surgery is becoming more common among bariatric procedures, especially conversions from Sleeve Gastrectomy (SG) to Roux-en-Y Gastric Bypass (RYGB) have significantly increased in the last few years in our center.

Objectives

Our aim is to analyze the reason for these conversions and our results after the second surgery.

Methods

Retrospective observational study including patients underwent to revisional surgery to convert from SG to RYGB from 2014 to 2022 in our center (Spanish secondary hospital).

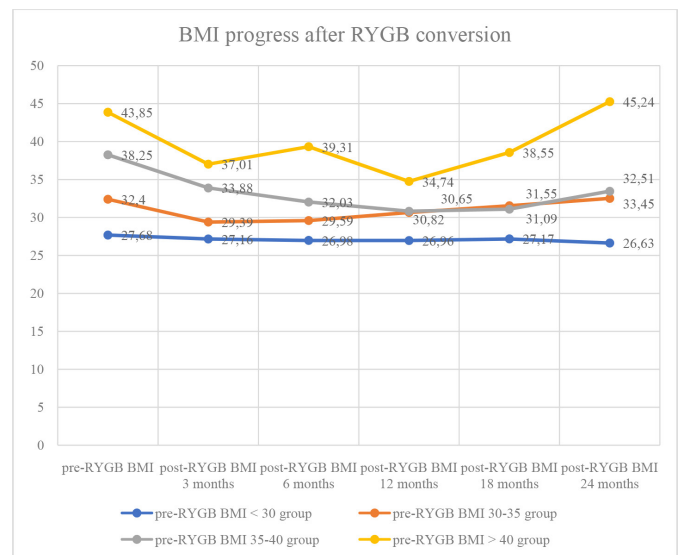
Results

From the total of 33 patients (66,7% female, median age 46,3, median BMI 44,7 (34,9-59,7)) before SG the comorbidities were: 33,3% diabetes, 69,7% hypertension, 66,7% sleep apnea (SA) and 0,9% gastroesophageal reflux disease (GERD). After SG, a complete remission was found in: 41,6% diabetes, 31,8% hypertension and 27,3% SA. The median post-SG BMI was 29,7 (20,9-40,3), calculated with the minimum weight achieved. Conversion to RYGB was performed after a median time of 5 years (0,3-16,7), with a median age of 53 years and a median BMI of 34,8 (22,7-49). The main reason to converse from SG to RYGB was very symptomatic GERD uncontrolled with PPI (81,8%). Vomiting with oral intolerance was also a frequent clinical presentation (33,3%). Weight regain was the principal reason to converse in only two patients. After RYGB, GERD was solved or improved in 88,4% of the cases. Regarding comorbidity: 57,1% diabetes, 46,7% hypertension and 41,17% SA were solved or improved after RYGB. Weight loss results were variable, one year after RYGB the median BMI was 30,8 (23,4-38,3). To analyze it, we made four groups according to pre-RYGB BMI (table). The group with pre-RYGB BMI > 40 did not achieved weight loss. 35-40 BMI pre-RYGB group was able to maintain a BMI < 35 in time. Rest of the groups were stable after the conversion (figure).

Conclusion

Conversion to RYGB was effective to control GERD, the main clinical problem after SG. It was also useful to control comorbidities. However, it wasn’t useful to achieve a better weight loss, especially in those patients with severe obesity.

Groups according pre-RYGB BMI	Percentage from total
<30	27,27%
30-35	24,24%
35-40	24,24%
>40	24,24%



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REVISIONAL ONE-STEP BARIATRIC SURGICAL TECHNIQUES AFTER LAPAROSCOPIC GASTRIC BAND FAILURE: A RETROSPECTIVE COHORT STUDY WITH 2-YEAR FOLLOW-UP

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Background

Revisional bariatric metabolic surgery (RBMS) is a procedure to manage a failed or complicated initial bariatric surgery. However, the RBMS type for optimal patient outcome after a failed laparoscopic adjustable gastric band (LAGB) remains unclear.

Methods

This was a retrospective database cohort study of various revisional surgeries for failed or complicated LAGB. The efficacy and safety of and morbidities after one-step Roux-en-Y gastric bypass (RYGB) (n=78), laparoscopic one-anastomosis gastric bypass (OAGB) (n=80), or laparoscopic sleeve gastrectomy (LSG) (n=70) as revisional surgeries were compared. Follow-ups were conducted at 6 months, 1 year, and 2 years after RBMS with a post-hoc pairwise comparison one-way analysis of variance (ANOVA).

Results

After 2 years, an equal percentage of excess weight loss was observed in the OAGB and RYGB groups (both > 90%; $p = 0.998$) compared with the LSG group (83.6%; $p = < 0.001$). The percentage of total weight loss was equal in all groups. A significantly higher incidence of early and late complications was observed in the RYGB group (19.2% and 14.1%) compared with the LSG group (8.6% and 8.6%), with the OAGB group demonstrating the lowest complication rate (3.8% and 1.3%) ($p=0.008, 0.003$). Revisional OAGB and RYGB showed significantly better food tolerance than LSG ($p = < 0.001$) with no significant differences between the two procedures ($p = 0.987$). The cohorts had 72.5%, 63.3%, and 54.9% resolution rates for diabetes mellitus, hypertension, and dyslipidemia, respectively ($p = > 0.60$).

Conclusion

One-step OAGB is a better revisional option after failed or complicated LAGB than LSG or RYGB in terms of weight loss efficacy, technical difficulty, and postoperative safety. In addition, operative time and early and late postoperative complications are lower in OAGB than in revisional RYGB and LSG.

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REVISIONAL SURGERY FOLLOWING ENDOSCOPIC SLEEVE GASTROPLASTY

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Background

Less invasive endoscopic bariatric procedures have become established for the management of obesity disease and the data supporting their impact on future bariatric surgery are limited in the literature.

Objectives

The purpose of the current study was to evaluate the complications and different technical aspects of revisional bariatric surgery following ESG in three specialized bariatric centers.

Methods

From January 2019-May 2022, all consecutive patients who underwent revisional surgery following ESG were retrospectively reviewed. Data on patient demographic characteristics, case history, intraoperative findings, technique, and adverse events were reviewed retrospectively.

Results

36 patients underwent different bariatric procedures: 31 women (86.1 %) with a mean age of 37.2 years (range:24-61) and mean Body Mass Index (BMI) of 36.7+/-4.6kg/m². The preoperative upper endoscopy analyzed for 28 patients found: a complete undo of plication in 13 cases (46.4%), some cinches with the stich in place in 11 cases (39.2 %) and an intact plication in 4 cases (14.3 %). They underwent different bariatric procedures: 28 cases of LSG (77.8 %), and 8 cases of RYGBP (22.2 %). Average time after ESG was 14.4 months (range 5-36). Different intraoperative additional techniques were used: fluoroscopic control in 20 cases, intraoperative endoscopy in 4 cases or opening of the greater curvature in 3 cases. There were 2 intraoperative incidents and one postoperative adverse event (one bleeding).

Conclusions

In our experience, the previous ESG has not induced any additional specific adverse events following bariatric revisional surgery. The revisional bariatric surgery following ESG is safe, but several technical points are important, and the team should be familiar with additional needed tools. The preoperative endoscopy is mandatory, but the endoscopic removal of anchors is not necessary.

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RISK FACTORS FOR EARLY READMISSION DUE TO MARGINAL ULCER AFTER LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS: A 2015-2021 MBSAQIP ANALYSIS

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Background

Marginal Ulcer (MU) following Roux-en-Y gastric bypass (LRYGB) is associated with significant morbidity. The rates of early marginal ulcers have decreased from 3.48 to 2.37 per 1000 person/year from 2015 to 2021 in the United States.

Objectives

We aimed to evaluate the risk factors associated with readmission due to MU within 30 days after RYGB and the postoperative 30-day outcomes of this cohort.

Methods

Patients who underwent RYGB and required readmission for Marginal Ulcer (MU) were identified using the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP) database from 2015 to 2021. Those who had a reoperation, intervention, or readmission due to causes other than MU were excluded. Bivariate and binary logistic regression analyses were performed.

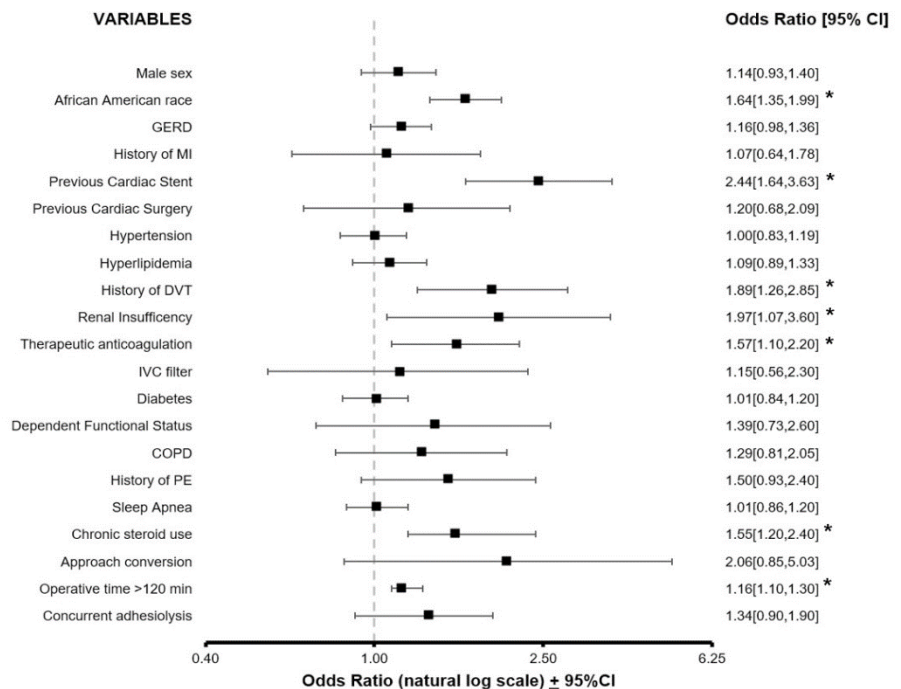
Results

Among 302,612 patients undergoing RYGB, 631 (0.21%) required readmission due to MU. Among these cases, 89.5% (n=565) required an intervention: 79.5% (n=502) underwent an endoscopic procedure, 4.1% (n=26) required reoperation, and 5.9% (n=37) underwent both. Parameters independently associated with an increased risk for early readmission due to MU included being African American (adjusted odds ratio [AOR], 1.61), current use of therapeutic anticoagulation (AOR, 1.81), or steroids/immunosuppressive drugs (AOR, 1.64), prolonged operative time (>120 min) (AOR, 1.20), and history of cardiac stenting (AOR, 2.85), deep vein thrombosis (AOR, 2.19), and renal insufficiency (AOR, 2.17) (Figure 1). Additionally, patients who had early MU reported significantly higher rates of postoperative complications such as cardiac, pulmonary, and renal complications, blood transfusion requirement, unplanned ICU admission, venous thromboembolism, surgical site infection (SSI), and sepsis (p<0.05).

Conclusion

The incidence of early readmission for MU following RYGB was less than 1%. Most of these cases required an endoscopic intervention. Some patient-related factors and increased operative time contributed to an increased risk of early readmission due to MU.

Figure 1. Forest plot depicts the multivariate logistic regression of the predictive factors for readmission for early marginal ulcer following Roux-en-Y gastric bypass.



* p-Value < 0.05

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RISK FACTORS OF ACUTE GOUTY ATTACK IN THE SHORT TERM AFTER BARIATRIC SURGERY

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Background

Bariatric surgery has been proved to be the most effective treatment for obesity. However, for patients with other serious metabolic comorbidities, due to complex basic conditions, the incidence of postoperative complications is high. Gouty attack is one of the serious postoperative complications, while few studies focused on the clinical characteristics and risk factors of gout attack after bariatric surgery.

Objective

To investigate the clinical characteristics and risk factors of acute gout attack in patients undergoing bariatric surgery.

Method

A retrospective analysis was conducted to collect the data of patients with gout who underwent bariatric surgery from January to October 2022. Patients were divided into attack group and non-attack group according to whether they had acute gout attack at 1 month after operation. Independent sample t-test, chi-square t-test, Multivariate Logistic analysis was used to find out the independent risk factors. Paired t test was used to compare the differences of preoperative and postoperative clinical characteristics in the attack group.

Result

A total of 49 patients enrolled in this study were divided into attack group (36 cases) and non-attack group (13 cases) according to whether they had gout attack within 1 month after surgery. C-peptide 60min ($p=0.018$), history of gout ($p=0.019$), number of attacks within one year before surgery ($p=0.019$), absolute value of serum uric acid change at 1 month after surgery ($p=0.015$) and preoperative medication ($p=0.008$) were significantly different between the two groups. The number of gout attacks in one year before surgery [OR=0.31, 95%CI (0.1270,0.757), $p=0.010$] and the absolute value of serum uric acid change at 1 month after surgery [OR=0.973, 95%CI (0.949,0.997), $P=0.031$] is the independent risk factors. And it was found that the peak pain duration of postoperative acute attack ($4.417\pm 7.515d$) was longer than that of preoperative ($1.419\pm 2.906d$).

Conclusion

Clinicians should pay more attention to patients with long and frequent history of gout. Giving them appropriate extension of presurgical preparation time, to reduce the risk of postoperative gout attack and to promote the satisfaction of surgery.

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RISK OF ESOPHAGEAL CANCER AFTER BARIATRIC SURGERY: COMPARISON BETWEEN THREE SURGICAL TECHNIQUES AT 10 YEARS

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Background

The risk of esophageal cancer after bariatric surgery is a matter of debate. Several studies have reported that bariatric surgery patients have a lower risk of cancer. However, esophageal cancer is associated with gastroesophageal reflux disease, which may increase after bariatric surgery and in particular after sleeve gastrectomy.

Objectives

The objective of this study is to evaluate the risk of esophageal cancer after two bariatric procedures: sleeve gastrectomy (SG) and gastric bypass (GBP).

Methods

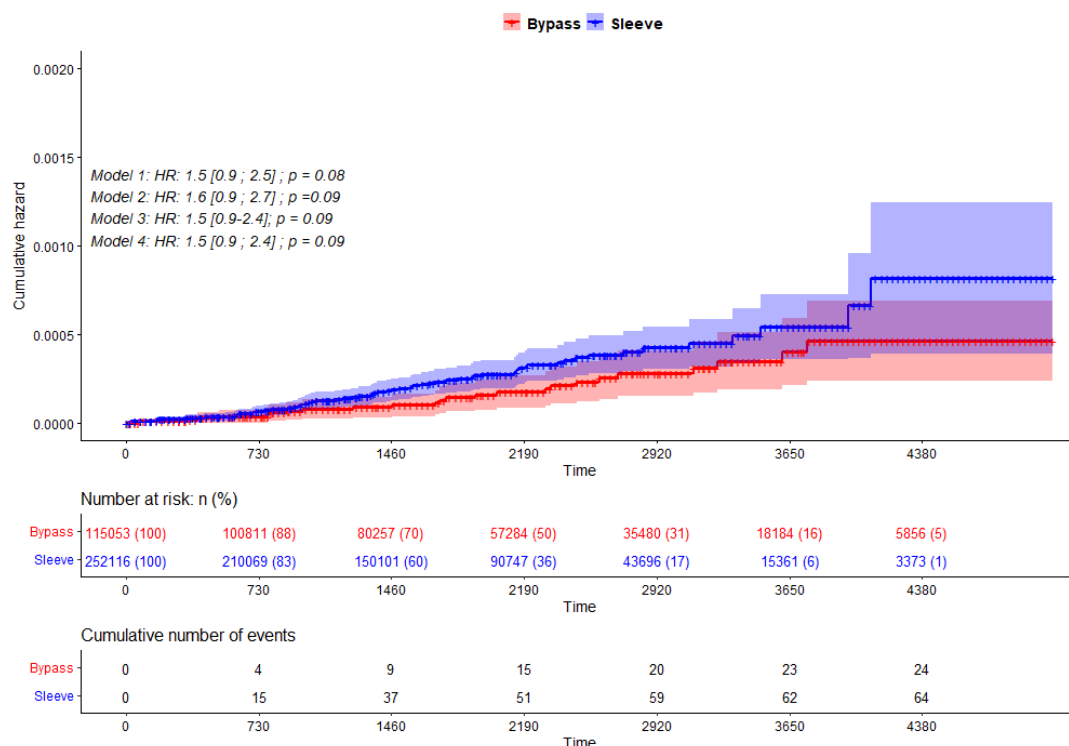
Data from patients operated on for bariatric surgery between 2007 and 2020 in France were extracted from a national discharge database (PMSI). Adult patients operated on for SG or GBP were included and followed up until December 2020. Patients were divided into two groups according to the procedure initially performed. The endpoints were the occurrence of esophageal and cardia cancers. To assess the effect of the type of bariatric procedure on the development of cancer, a multivariate analysis was performed using a marginal Cox model after matching on propensity score (PS). In the sensitivity analysis, we used different models: standard Cox regression, Cox regression adjusted on propensity score, and Cox model with adjustment for inverse probability of treatment weighting.

Results

Of the 367 169 patients included, 68.7% were SGs and 31.3% were GBPs. The two groups differed at inclusion in terms of age, sex, BMI, and comorbidities. Median follow-up was 6.0 years (IQR 3.0-8.0 years) for the entire cohort, and approximately 35,000 patients were followed for at least 10 years. A total of 88 esophageal cancers were identified, including 64 after SG and 24 after GBP. In multivariate analysis, no significant difference was found between SG and GBP on cancer incidence (HR 1.6, 95%CI 0.9-2.7, p=0.09 for OS versus GBP). No differences were found in sensitivity analyses.

Conclusion

In this large national cohort of bariatric surgery patients, no significant differences were found in the incidence of esophageal and cardia cancer between OS and GBP.



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RISK–BENEFIT BALANCE OF SIMULTANEOUS GASTRIC BYPASS OR SLEEVE GASTRECTOMY AND PROPHYLACTIC CHOLECYSTECTOMY: A COMPREHENSIVE NATIONWIDE COHORT OF 289,627 PATIENTS

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Objective

To assess the relevance of concomitant laparoscopic bariatric surgery (BS) and cholecystectomy.

Summary background data

Because of the massive weight loss it induces, BS is associated with an increase in the frequency of gallstones. However, no consensus yet exists on the risk-to-benefit ratio of a prophylactic cholecystectomy during BS in asymptomatic patients to prevent long-term biliary complications.

Methods

Using data from a nationwide administrative database, we designed this nationwide retrospective cohort study in two parts. First, we devised a matched study (propensity score) comparing 90-day morbidity of BS with or without concomitant cholecystectomy. Second, we observed medium-term biliary complication after BS when no cholecystectomy had been performed during BS.

Results

Between 2013 and 2020, 289,627 patients had a sleeve gastrectomy (SG: 70%) or a gastric bypass (GBP: 30%). In our matched group analysis, we included 9,323 patients in each arm. The complication rate at Day 90 after surgery was greater in the concomitant cholecystectomy arm [OR 1.3 (1.2–1.5), $p < 0.001$]. Greater incidence of complications were also associated with GBP (9.1%, vs SG with 5.7%, $p < 0.001$), male gender ($p = 0.008$), older age ($p < 0.001$), and BMI < 40 ($p = 0.002$). Eighteen months after BS, 12,257 (4%) patients received interval cholecystectomy. More cholecystectomy took place after GBP than after SG (4.6% vs 4.3%, $p < 0.001$). The principal indications were symptomatic cholelithiasis (82.9%) or acute cholecystitis (12.2%). In the whole cohort, risk at 18 months of symptomatic gallstone migration was 0.1%, of pancreatitis 0.08%, and of angiocholitis 0.1%.

Conclusion

Because of an unfavorable risk-benefit balance, prophylactic cholecystectomy during SG or GBP should not be recommended.

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SAFETY AND EFFICACY OF ROUX-EN-Y GASTRIC BYPASS AS REVISIONAL BARIATRIC SURGERY AFTER FAILED ANTI-REFLUX SURGERY: A SYSTEMATIC REVIEW

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Background

The prevalence of obesity and gastroesophageal reflux disease (GERD) is increasing in parallel. In patients with both severe obesity and GERD, Roux-en Y Gastric Bypass (RYGB) is considered the surgical procedure of choice.

Objectives

This systematic review evaluates the safety and efficacy of Roux-en-Y gastric bypass (RYGB) as a revisional bariatric surgery after failed anti-reflux surgery.

Methods

A systematic literature search next to the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines was performed for articles published by 30 Mar 2022. After examining 416 papers, 23 studies were included (n = 892 patients).

Results

Primary anti-reflux surgery included mainly Nissen-fundoplication (16 studies). Reasons for revisional surgery included predominantly GERD, (reported by 18 studies), obesity (reported by 6 studies) and hiatal hernia (reported by 6 studies). Interval to surgical revision was 5.58 ± 2.46 years (range: 1.5 to 9.4 years). Upper endoscopy at revision was performed for all patients; esophageal manometry and ph-monitoring were reported in 6 and 4 studies, respectively. Mean BMI at revision was 37.56 ± 5.02 kg/m² (range: 31.4-44 kg/m²). Mean %EWL was 69.74% reported by 12 studies. Delta BMI reported by 7 studies was 10.41 kg/m². The rate of perioperative complications was 27.51%, including mostly leakage, stenosis and small bowel obstruction. Mean improvement rate of GERD was 91.2% with a mean follow-up of 25.64 ± 16.59 months reported in 20 studies.

Conclusions

RYGB seems to be an efficient surgical treatment option in failed anti-reflux procedures, but should be performed in experienced centers for selected patients, since the rate of perioperative and long-term complications must be minimized. Cooperation between bariatric and reflux surgeons is essential to offer to patients with obesity and GERD the best long-term outcome.

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SAFETY OF NEW BARIATRIC SERVICE IN A DISTRICT GENERAL HOSPITAL: PRELIMINARY OUTCOMES

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Background

Obesity is a known global epidemic. It is recognized as a chronic disease with associated comorbidities and huge economic burden. Thus, expanding bariatric services into district general hospital (DGH) is a good tool to help fight the epidemic and reduce waiting time.

Objectives

Assess safety of providing a bariatric surgery in a DGH.

Methods

A business plan was approved locally. A protocol of service was introduced to the referral bariatric center. Mutual visits to assess available facilities and provide recommendations for changes. DGH teams visited the bariatric center to review the ongoing practices. Program was started on May 2021 for 6 months as Phase I where bariatric center provides surgery for their low risk patients through our hospital. Phase II which is running at the moment, included local surgical team with previous bariatric experience to be involved in performing surgery. We herein, assess safety and efficacy of phase I.

Results

Three bariatric surgeons and 4 local anaesthetists provided the service. 15 patients (all females) aged 30-57 years with severe obesity - average body mass index (BMI) 43.9- had their surgery in phase I. Nine patients (60%) has American Association of Anaesthesia (ASA) grade III while 6 patients (40%) had ASA grade II. Only 1 patient (6.6%) was pre-diabetic while 5 patients (33.3%) had Hypertension. Six patients (40%) had Gastro-Oesophageal Reflux Disease (GORD) . Laparoscopic Roux-en-Y gastric Bypass (LRYGBP) was offered to 9 patients while 5 patients underwent Laparoscopic Sleeve Gastrectomy (LSG). One patient planned for LSG had their surgery abandoned due to technical difficulty. None of the patients developed intra or post operative complications or required intensive care unit (ICU) admission. Average length of stay was 1.5 days.

Conclusion

A DGH can provide a safe and effective bariatric service.

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**SAME-DAY DISCHARGE AFTER LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS:
A COHORT OF 500 CONSECUTIVE PATIENTS**

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Introduction

There is an increasing demand on hospital capacity worldwide due to the COVID-19 pandemic and local staff shortages. Novel care pathways have to be developed in order to keep bariatric and metabolic surgery maintainable. Same-day discharge (SDD) after laparoscopic Roux-en-Y gastric bypass (RYGB) is proved to be feasible and could potentially solve this challenge.

Objective

The aim of this study was to investigate whether SDD after RYGB is safe for a selected group of patients.

Methods

In this single-center cohort study, low-risk patients were selected for primary RYGB with intended same-day discharge with remote monitoring. All patients were operated according to ERAS protocol. There were strict criteria on approval upon same-day discharge. It was demanded that patients should contact the hospital in case of any signs of complications. Primary outcome was the rate of successful same-day discharge without readmission within 48 h. Secondary outcomes included short-term complications, emergency department visits, readmissions, and mortality.

Results

Five hundred patients underwent RYGB with intended SDD, of whom 465 (93.0%) were successfully discharged. Twenty-one patients (4.5%) were readmitted in the first 48 h postoperatively. None of these patients had a severe bleeding. This results in a success rate of 88.8% of SDD without readmission within 48 h.

Conclusions

Same-day discharge after RYGB is safe, provided that patients are carefully selected and strict discharge criteria are used. It is an effective care pathway to reduce the burden on hospital capacity.

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SASI BYPASS FOR HIGHER BMI AND T2DM: TECHNICAL SKILLS, MORBIDITY ANALYSIS AND SHORT-TERM RESULTS FROM A HIGH VOLUME BARIATRIC CENTER

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Background

The single anastomosis sleeve ileal (SASI) bypass is a new promising restrictive and malabsorptive bariatric surgery associated with good short-term outcomes in regard to weight loss, especially for severe obesity, and improvement in comorbidities, namely type 2 diabetes mellitus (T2DM) with an acceptably low complication rate. It also offers a good control of deficiencies because of its anatomical advantages. Our minimally invasive 3-ports-technique is feasible, safe and easily reproducible.

Objectives

The present study from a high-volume obesity multi-procedure aimed to describe our experience and to evaluate the morbidity, the effect on weight-loss and the control of diabetes type II of this new bariatric procedure.

Methods

This is a retrospective analysis from our prospective database on 38 patients with BMI >45 kg/m² who underwent SASI bypass between January 2020 and March 2023. The primary outcomes are preliminary percentage of excess weight loss (%EWL), T2DM remission and perioperative and short-term morbidity analysis. The surgical technique is standardized for all patients, a 3-ports laparoscopic classical SASI with 250cm common limb employing a “barbed suture trick” to lift the left hepatic lobe.

Results

A group of 38 patients underwent SASI bypass with a mean preoperative body mass index of 49.57 ± 5.36 kg/m², including 10 patients with type II diabetes. The 3-months, 6-months and 1-year mean BMI was respectively 38.31 ± 4.58 kg/m², 33.61 ± 4.08 kg/m², 28.2 ± 2.68 kg/m². The 3-months, 6-months and 1-year mean %EWL was respectively 43.6%, 62.6% and 83.5%. Diabetic remission rates were assessed with Hb1AC with normalization in 87.5% of patients after 1 month. After 3 months, overall Hb1AC level was less than 6% and all of the patients could stop treatment for diabetes. Complication occurred in 3 cases: 2 patients presented dysphagia, including one with persistent biliary reflux who required reversion to bypass, one iatrogenic intestinal perforation who needed a segmental bowel resection.

Conclusion

SASI bypass is a promising, safe and feasible bariatric procedure which offers rapid resolution of T2DM and a powerful effect on weight loss. As expected, further long-term prospective studies are needed.

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SERIOUS COMPLICATIONS AFTER REVISIONAL BARIATRIC SURGERY: A NATIONAL RETROSPECTIVE STUDY FROM THE FRENCH NATIONAL DATABASE

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Introduction

Revisional bariatric surgery is nowadays the third most frequently performed procedure in bariatric surgery, after sleeve gastrectomy and gastric bypass. The aim of this study is to evaluate the serious complications associated with second intention surgery versus first-line surgery.

Method

Using a French national database, the “Programme de Médicalisation des Systèmes d’Information” (PMSI), which measures the medico-economic activity of all public and private establishments, we identified all bariatric surgery procedures performed in adults in recent years and analyzed the serious complications at 90 days.

Results

Between 2016 and 2022, revision procedures accounted for 13.3% of all bariatric surgery procedures. Post-sleeve revisional surgery progressively increased over the period, exceeding post-gastric banding revisional surgery in 2022 (49.8% versus 42.7%), whereas in 2016, 75.6% of revisional surgeries followed gastric banding surgeries. The rates of serious complications (Clavien \geq 3) at 90 days were 5.7% after primary surgery and 8.5% after revisional surgery ($p < 0.001$). In particular, the rate of fistula was 2.2% and 4.9% respectively ($p < 0.001$). Revisional surgery after sleeve gastrectomy had a fistula rate of 6.3% ; higher than the risk of fistula in revisional surgery after gastric banding surgery (3.6%, $p < 0.001$). In multivariate analysis, the risk of fistula in revisional surgery compared to first-intention surgery was OR 1.0. In multivariate analysis the risk of fistula after revisional surgery compared to first-intention surgery was OR 1.56 (CI 95% 1.44-1.68, $p < 0.001$) for revisional after gastric banding, OR 2.28 (CI 95% 2.08-2.49, $p < 0.001$) for revisional after sleeve and OR 2.44 (1.96-3.01, $p < 0.001$) for revisional after gastric bypass.

Conclusion

The profile of post-bariatric revisional surgery has evolved in recent years and post-sleeve procedures currently represent the most frequent revision. This type of revision has a higher risk of fistula. It is therefore possible that in the coming years we will see an increase in the risk of serious complications in bariatric surgery.

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SEX SPECIFIC PATTERNS OF FREE FAT MASS LOSS AFTER BARIATRIC SURGERY AND THE RELATIONSHIP WITH CARDIORESPIRATORY FITNESS AND HANDGRIP STRENGTH

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Background

In general, fat free mass (FFM) is higher in men compared to women. Loss of FFM after metabolic-bariatric surgery (MBS) can negatively affect physical functioning, weight loss maintenance, metabolic improvement and quality of life.

Objectives

To determine loss of FFM after MBS in men, premenopausal and postmenopausal women, and to study if this is associated with changes in cardiorespiratory fitness (CRF), handgrip strength and glycemic control (assessed by HbA1c).

Methods

In this cross-sectional study, primary MBS patients were included when follow up was at least 18 months after surgery. Body weight and FFM were measured preoperatively and at 3, 6, 9, 12, 18, 24, 36, 48, 60 and 72 months after surgery using bioelectrical impedance analysis. CRF was assessed by the Åstrand test and muscle strength with the isometric handgrip strength. Linear mixed models were used to study the relationship between FFM loss and CRF, muscle strength and HbA1c. To assess sex differences the 3 groups were added to the model as covariates. The model was adjusted for preoperative BMI, preoperative FFM, presence of diabetes and time of follow-up.

Results

The population consisted of 221 men (21.6%), 613 premenopausal women (60.0%) and 187 postmenopausal women (18.3%). Men had a higher FFM loss at 18 and 24 months compared to pre-menopausal women and at 3, 6, 9, 12 and 18 months compared to postmenopausal women (Table 1). FFM loss was associated with postoperative handgrip strength in all groups (β : -0.41, 95%CI -0.48 to -0.33, $p < 0.001$). The adjusted model showed sex differences with higher values for postoperative CRF as well as HbA1c in premenopausal and postmenopausal women compared to men (Table 2).

Conclusion

There are large differences in fat free mass loss between men, premenopausal women and postmenopausal women after MBS and MBS-induced loss of FFM had a negative impact on handgrip strength in all groups. These data suggest that assessing fat free mass loss during weight loss after MBS should be included during clinical follow up and interventions to reduce loss of FFM could improve muscle function.

Table 1. Change in fat free mass after surgery

	Pre surgery	3 months	6 months	9 months	12 months	18 months	24 months	36 months	48 months	60 months	p-value*
Male											
N	215	195	198	126	187	132	157	90	60	42	
FFM (kg)	81.6 ± 11.8	75.1 ± 9.8*	72.8 ± 9.3*	71.6 ± 10.7	71.2 ± 9.2	70.5 ± 8.9	71.0 ± 8.6	71.4 ± 9.5*	72.2 ± 10.6	73.0 ± 10.9	< 0.001
Δ FFM (kg)	NA	6.2 ± 7.4	8.6 ± 7.8*	8.5 ± 8.7*	10.3 ± 8.6	10.8 ± 8.8	11.5 ± 8.0	8.8 ± 9.1*	9.1 ± 10.5	7.9 ± 9.2	< 0.001
FFMI	24.8 ± 2.7	22.8 ± 2.0*	22.1 ± 1.9*	21.7 ± 2.3*	21.6 ± 1.9	21.4 ± 1.7	21.6 ± 2.0	21.7 ± 2.1*	21.7 ± 2.0	22.3 ± 2.4	< 0.001
Female < 55 year											
N	600	559	565	401	536	379	416	301	176	138	
FFM (kg)	59.7 ± 6.1*	53.9 ± 5.3**	51.7 ± 5.4**	50.8 ± 5.6**	50.2 ± 5.5**	49.8 ± 5.5*	50.4 ± 6.1**	49.9 ± 5.9*	51.5 ± 6.4**	51.5 ± 5.8*	< 0.001
Δ FFM (kg)	NA	5.9 ± 3.6	8.0 ± 3.7*	8.7 ± 3.8*	9.6 ± 4.0*	9.8 ± 4.3*	9.6 ± 4.9**	9.2 ± 4.9	8.2 ± 5.3**	8.0 ± 5.1	< 0.001
FFMI	21.4 ± 1.7*	19.3 ± 1.6**	18.6 ± 1.6**	18.3 ± 1.9**	18.0 ± 1.7**	17.9 ± 1.7*	18.1 ± 1.9*	18.1 ± 1.7*	18.3 ± 1.8**	18.7 ± 1.6*	< 0.001
Female ≥ 55 year											
N	179	168	170	110	161	114	137	95	59	29	
FFM (kg)	57.0 ± 6.3*	51.7 ± 5.1**	49.7 ± 5.6**	48.6 ± 5.0**	48.0 ± 5.0**	47.4 ± 5.4*	46.6 ± 4.9*	47.5 ± 5.3*	47.6 ± 5.9*	47.4 ± 5.7*	< 0.001
Δ FFM (kg)	NA	5.4 ± 3.7*	7.3 ± 3.8**	8.1 ± 4.1**	9.3 ± 4.6**	9.6 ± 4.7*	10.0 ± 5.6	9.0 ± 5.1	9.8 ± 5.8	8.2 ± 4.8	< 0.001
FFMI	20.9 ± 2.0**	18.9 ± 1.7**	18.1 ± 1.7**	17.9 ± 1.5**	17.6 ± 1.8**	17.3 ± 2.1**	17.2 ± 1.9**	17.5 ± 1.6**	17.3 ± 1.7**	17.6 ± 1.7**	< 0.001

* Overall P-value for mixed model on FFM measurements over time
 * P < 0.05 with respect to former measurement
 * P < 0.05 with respect to males
 * P < 0.05 with respect to premenopausal women

Table 2. Linear mixed models for association between FFM and CRF, hand grip strength and HbA1c; reference category men

		Premenopausal women			Postmenopausal women		
		β	95% CI	p-value	β	95% CI	p-value
CRF	Model 1	-0.79	-0.92 to -0.66	<0.001	-0.91	-1.09 to -0.74	<0.001
	Model 2	0.32	0.12 to 0.52	<0.001	0.31	0.08 to 0.55	<0.001
Hand grip strength	Model 1	-19.85	-21.03 to -18.67	<0.001	-23.29	-24.82 to -21.77	<0.001
	Model 2	-7.79	-9.66 to -5.91	<0.001	-9.33	-11.48 to -7.19	<0.001
HbA1c	Model 1	-0.72	-1.71 to 0.26	0.15	1.89	0.64 to 3.15	0.003
	Model 2	1.82	0.42 to 3.21	0.01	3.17	1.58 to 4.76	<0.001

Model 1: crude
 Model 2: adjusted for preoperative BMI, preoperative FFM, presence of diabetes and follow-up moment

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SEX, BMI, PREOPERATIVE FIB-4 INDEX AND IRON SUPPLEMENTATION WERE ASSOCIATED WITH POSTOPERATIVE ANEMIA AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY AMONG CHINESE PATIENTS

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Background

Bariatric surgery is an effective strategy for weight loss. Although started late, it is estimated that more than 96,285 bariatric procedures had been conducted in China since 2001, and laparoscopic sleeve gastrectomy (LSG) accounted for 60-70% in 2021. Given the different genetic background and lifestyle, the incidence of anemia, a common postoperative complication, remains to be estimated, along with its risk factors to be explored in Chinese obese patients.

Objectives

This study aimed to investigate the incidence of anemia at different times after LSG and its risk factors in Chinese population.

Methods

A retrospective cohort study was conducted on 619 patients who underwent LSG at Shanghai Huashan Hospital between 2012 and 2022. Physical examination, biochemical tests, and evaluations of common comorbidities were performed before the surgery and during the follow-up. The incidence of anemia at different postoperative stages were reported, and its associations with risk factors were explored using multivariable logistic regression.

Results

Out of the 619 patients, 567, 436, and 189 participated in the short-term (within 3 months after surgery), mid-term (3-12 months), and long-term (12-60 months) follow-up visits, respectively. The incidence rates of anemia for each period were 9.3%, 6.6%, and 9.1% for males, lower than that of 13.5%, 20.6%, 39.2% for females. During the short-term follow-up, iron deficiency before surgery was associated with a higher incidence of postoperative anemia (OR: 3.67, 95% CI: 1.11-12.16), and preoperative iron supplementation was associated with a lower risk of anemia among all patients (OR: 0.46, 95% CI: 0.27-0.77) and female patients (OR: 0.49, 95% CI: 0.27-0.87). During the mid-term follow-up, females with advanced Fib-4 level (≥ 1.45 , an index for liver fibrosis) had a higher incidence of anemia (OR: 5.72, 95% CI: 1.24-26.49). Among male patients, higher preoperative BMI was associated with a lower incidence of anemia (OR: 0.79, 95% CI: 0.64-0.98).

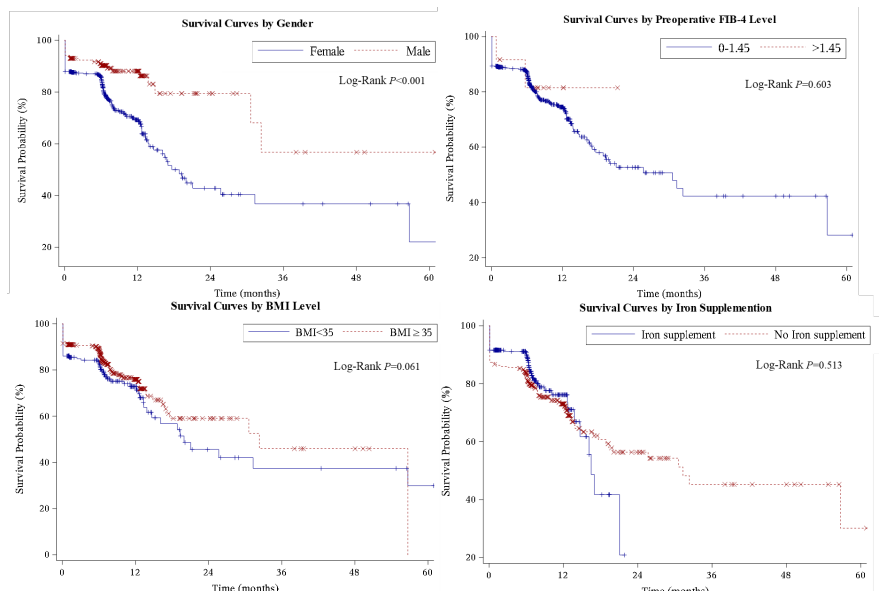
Conclusion

Postoperative anemia was frequent in Chinese patients undergoing LSG bariatric surgery, and was associated with female gender, lower BMI, advanced preoperative Fib-4 level, and a lack of iron supplementation after surgery. The role played by liver fibrosis in postoperative anemia appeals for further studies.

Table 1. Multivariable regression of factors influencing the incidence of anemia in each period

Variables	Short-term (0-3m)		Mid-term(3+-12m)		Long-term(12+-60m)	
	OR (95%CI)	P	OR (95%CI)	P	OR (95%CI)	P
All patients						
Age (Continuous)	1.01 (0.98-1.07)	0.611	1.01 (0.97-1.04)	0.663	1.00 (0.96-1.03)	0.854
Gender (ref=F)	0.72 (0.38-1.38)	0.322	0.27 (0.11-0.66)*	0.004	0.19 (0.07-0.49)*	0.001
BMI (Continuous)	0.99 (0.95-1.04)	0.739	0.98 (0.93-1.03)	0.445	0.95 (0.89-1.01)	0.076
Preoperative FIB-4 level (ref=<1.45)	0.65 (0.08-5.14)	0.683	5.08 (1.19-21.67)*	0.028	4.74 (0.76-29.36)	0.095
Iron supplement use (ref=No)	0.46 (0.27-0.77)*	0.003	0.62 (0.36-1.05)	0.076	0.91 (0.41-2.00)	0.813
Male						
Age (Continuous)	1.07 (0.99-1.14)	0.063	1.01 (0.92-1.12)	0.780	1.03 (0.95-1.13)	0.476
BMI (Continuous)	1.03 (0.93-1.13)	0.602	0.79 (0.64-0.98)*	0.033	0.94 (0.81-1.09)	0.404
Iron supplement use (ref=No)	0.42 (0.12-1.46)	0.174	0.17 (0.02-1.54)	0.205	0.76 (0.08-7.40)	0.811
Preoperative iron deficiency (ref=No)	3.76 (1.18-12.00)*	0.025	0.63 (0.06-6.14)	0.687	1.25 (0.20-7.88)	0.813
Female						
Age (Continuous)	0.99 (0.96-1.03)	0.746	1.00 (0.97-1.04)	0.851	0.98 (0.94-1.02)	0.372
BMI (Continuous)	0.98 (0.93-1.04)	0.556	1.00 (0.95-1.06)	0.945	0.95 (0.88-1.02)	0.129
Preoperative FIB-4 level (ref=<1.45)	1.01 (0.12-8.62)	0.990	5.72 (1.24-26.49)*	0.026	7.91 (0.81-77.22)	0.075
Iron supplement use (ref=No)	0.49 (0.27-0.87)*	0.015	0.70 (0.40-1.23)	0.316	1.02 (0.41-2.52)	0.971

*. P<0.05; Age, gender and BMI were adjusted in each model (excluding gender when stratified by male and female); Inclusion criteria of other variables were considered for statistical significance (P<0.05).



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SHORT- AND LONG-TERM IMPACT OF SECOND BARIATRIC-METABOLIC OPERATIONS

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Background

Bariatric-metabolic re-operation is one durable treatment option for patients who do not achieve adequate weight loss and co-morbidity resolution following first bariatric-metabolic procedure. There is limited evidence on the appropriate re-operation strategy, which poses challenges in clinical practice.

Objective

Retrospectively assess the efficacy of bariatric-metabolic re-operation among patients who had undergone secondary bariatric procedure.

Methods

Patients who had undergone or planning to undergo a bariatric-metabolic operation were recruited (Abu Dhabi Diabetes & Obesity Study; ADOS2B). Out of 749 patients, 22 had >1 bariatric-metabolic operation. Patients with missing data on type or date of first (B1) or second (B2) operations were excluded. Efficacy of re-operation was assessed by comparing data at 12 months pre-B2 (baseline) to that between 3-24 months post-B2. Wilcoxon Signed-Rank test was used for statistical analyses.

Results

Thirteen patients were included in our analyses. At B2, median age was 40.0 (32.0-43.0) years; 69.2% were female; 6 had sleeve gastrectomy, and 7 had gastric bypass. All patients who initially had a sleeve gastrectomy (n=5), had a gastric bypass at B2. None of the patients had a gastric bypass at B1. Compared to baseline, there were significant decreases in weight and BMI at all timepoints post-B2: largest drop in weight at 3-6 months post-B2 (**Figure 1**). Excess body weight (EBW) lost was significantly higher among patients who had a gastric band at B1 compared to those who had a sleeve gastrectomy [Mean EBW lost: 27.8 Kg (74.8%) versus 9.6 Kg (32.8%); $p < 0.01$]. HbA1c levels decreased significantly among patients with prediabetes or type 2 diabetes (n=6) from a median (interquartile range; IQR) of 5.70% (5.50-5.64) to 5.30 (5.00-5.50) ($p = 0.031$).

Conclusions

Largest weight loss benefits from re-operation were observed among patients who initially had gastric banding. In line with previous findings¹, these results suggest that gastric banding may not be an ideal primary bariatric-metabolic operation for individuals with severe obesity. Further identification of re-operation success measures is crucial in building optimum treatment strategies.

1. Kindel T, Martin E, Hungness E, Nagle A. High failure rate of the laparoscopic-adjustable gastric band as a primary bariatric procedure. *Surg Obes Relat Dis.* 2014.

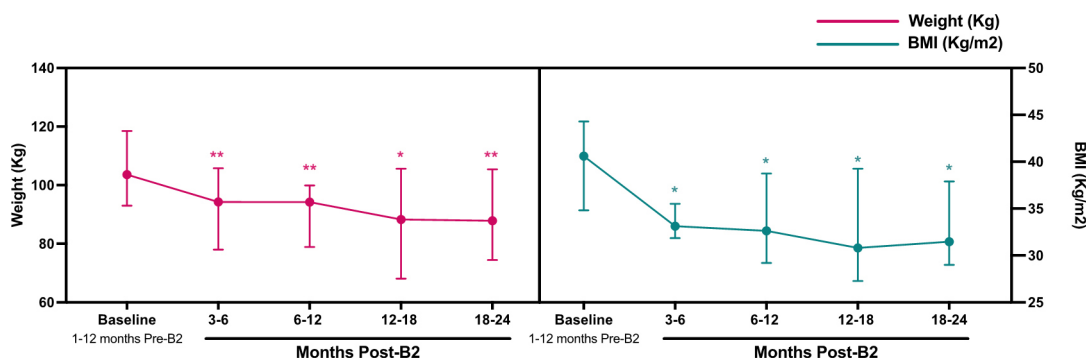


Figure 1. Changes in weight and BMI among study participants.

B1: first bariatric-metabolic operation; B2: second bariatric-metabolic operation
Wilcoxon Signed-Rank Test: * $P < 0.05$; ** $P < 0.01$

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SHORT TERM CHANGES IN DES-ACYL GHRELIN FOLLOWING BARIATRIC SURGERY

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Background

Obesity is a major global healthcare burden associated with significant socioeconomic costs. Bariatric surgery could be a long-term solution for it, but still all the mechanisms of the weight loss after the surgery remain unclear. One aspect of the weight regulatory system that is affected after bariatric surgery is secretion of des-acyl ghrelin (DAG). Emerging evidence has shown that DAG has independent biological activity, which may antagonize the orexigenic effects of acyl ghrelin.

Methods

This was a multicentre prospective cohort study in 3 hospitals in Latvia specialized in bariatric surgery. Fasting blood samples for assaying unacylated ghrelin were collected one day prior to bariatric surgery, two days after, and in three months after bariatric surgery. Anthropometric examination was performed at the same time.

Results

A total of 62 patients were included in the study. 64.5% (n = 40) of all study patients underwent Roux-en-Y-gastric bypass (RYGB) and 35.5% (n = 22) underwent sleeve gastrectomy (SG). Most of the patients (67.7%) were females. Median body weight was 129 kg (IQR 106-150kg) with median BMI 45.1 kg/m². The median excess weight loss (EWL) for all patients three months after surgery was 40% (IQR 32-54%). There was initial sharp drop in DAG two days after the bariatric surgery with gradual increase throughout the 3 month follow-up period. At the third sampling time point (3 months following bariatric surgery) DAG levels were higher in the blood serum of RYGB surgery patients compared to those who underwent SG. There was a strong negative correlation between the first DAG samples and BMI 3 months after the bariatric surgery. Specifically, the higher the DAG level in the first sample, the lower the patient's BMI was after 3 months.

Conclusion

The current study demonstrates that bariatric surgery modifies circulating UnAG profile with sharp drop within 2 days after the surgery and slight increase within 3-month period after RYGB and SG. DAG is a strong potential candidate to become as a marker of metabolism improvement after bariatric surgery.

Keywords: Des-acyl ghrelin (DAG); unacylated ghrelin (UnAG), bariatric surgery, Roux-en-Y-gastric bypass (RYGB), sleeve gastrectomy SG, weight loss, hormones.

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SHORT TERM IMPACT OF BONE MINERAL DENSITY FOLLOWING ROBOTIC ONE ANASTOMOSIS GASTRIC BYPASS SURGERY (OAGB): 2 -YEARS OUTCOMES

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Background

Metabolic surgery is the effective treatment for obesity management but along with significant reduction in BMI (Body Mass Index) these procedures can lead to impaired intestinal absorption of calcium and vitamin D3 and its a challenging to maintain calcium homeostasis and these factors can contribute to increased skeletal fragility. Emerging evidence suggests that one anastomosis gastric bypass surgery (OAGB) leads to significant bone mineral density (BMD) losses.

Objective

To evaluate Bone Minerals Density (BMD) changes 2 years after robotic one anastomosis gastric bypass surgery (OAGB)

Methods

Thirty-three women (mean age: 34.4 ± 12.3 years) who underwent robotic one anastomosis gastric bypass surgery (OAGB) and completed 24 months of follow-up were evaluated prospectively at baseline and at 12 months, and 24 months postoperatively. Collected data include BMD at the total hip, femoral neck, and lumbar spine measured by dual-energy x-ray absorptiometry and anthropometrics, biochemical, nutritional, and physical activity parameters.

Results

At 24 months, patients achieved a mean body mass index and excess weight loss of 27.8 ± 4.2 kg/ m² and 80.5 ± 17.5 %, respectively. At 18 months patients achieved their nadir weight. Femoral neck BMD decreased significantly from baseline to 24 months ($.924 \pm .124$ versus $.870 \pm .129$ g/cm² $p < .001$), with no change between 12 months and 24 months ($P = .273$). Total hip BMD decreased significantly from baseline to 24 months ($1.004 \pm .105$ versus $.965 \pm .132$ g/cm², $p < .001$) but increased between 12 months and 24 months ($P = .001$). No significant changes were noted in lumbar spine BMD. The percentage of changes in the femoral neck and the total hip BMD from baseline to 24 months positively correlated with postoperative excess reduction in body mass index ($r = .352$, $P = .045$, and $r = .416$, $P = .018$, respectively).

Conclusion

This study shows that after malabsorptive procedure like one anastomosis gastric bypass, patients experienced significant bone loss at the total hip and femoral neck more than 2 years postoperatively.

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SHORT-TERM OUTCOMES OF SINGLE ANASTOMOSIS DUODENO-ILEAL BYPASS (SADI) VERSUS ONE ANASTOMOSIS GASTRIC BYPASS (OAGB) AFTER SLEEVE-GASTRECTOMY (SG) NON-RESPONDER

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Background

Although it is the most popular bariatric strategy, sleeve gastrectomy has a significant percentage of non-responder. Malabsorptive strategies are proposed to address this.

Objectives

In our tertiary bariatric center, we compare our cohorts of post-SG SADI and OAGB in terms of weight loss, resolution of associated comorbidities and morbidity/mortality.

Methods

We analyzed a retrospective cohort of 182 patients which had either a laparoscopic SADI or OAGB after SG non-responder. SADIs were performed with a 250 cm common channel, and OAGB with 150-200cm biliopancreatic limb. Statistical analysis was performed using an inversed propensity score weighting.

Results

There were 133 patients in the SADI-group and 49 patients in the OAGB-group. Baseline characteristics were comparable, except for age. Mean preoperative BMI was 44 versus 44.4 Kg/m² in SADI and OAGB groups, respectively. Preoperative type2 diabetes (T2D) was present in 25.6% and 20.4% of cases in SADI and OAGB-groups ($p=0.304$). At 1 year, the estimated mean BMI in the SADI and OAGB-groups was 34.7 and 36.8kg/m² respectively ($p=0.0156$). At 1 year, the estimated mean EWL in the SADI and OAGB-groups was 52.8% versus 40.2 % ($p<0.0001$). T2D remission was similar (SADI-group: 60.6% versus OAGB-group: 45.5%, $p=0.489$). 30days major morbidity rate was 3% (n=4) in SADI-group (1 duodeno-ileostomy leak and 3 intra-abdominal abscesses) and 12.5% (n=6) in OAGB-group (2 marginal ulcers, 2 gastro-jejunostomy stenosis, 1 gastro-jejunostomy leak, and 1 incisional hernia). Late morbidity occurred in 7.5%(n=10) in SADI-group (3 surgical revisions for malabsorption) and 18.4% (n=9) in OAGB-group (3 dumping syndrome; no malnutrition). In the SADI group: 36.9% had at least weekly GERD symptoms with 5.3% having poorly controlled symptoms on PPI; in the OAGB group: 61.2% had at least weekly GERD symptoms with 12.2% having poorly controlled symptoms on PPI ($p=0.009$). There was no mortality at one year.

Conclusion

Both surgeries are effective revisional strategies in case of SG non-responder. SADI may be safer and more effective in terms of weight loss but presents a 2% risk of surgical revision for malnutrition. OAGB may be a good alternative, however, GERD is a valid concern. A randomized-controlled study with long-term follow-up appears necessary.

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SHORT-TERM RESULTS OF THE PILOT PROJECT AIMED AT OPTIMIZING THE CARE OF BARIATRIC PATIENTS IN THE PERIOPERATIVE PERIOD

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Background

Preparation of bariatric patients for surgery can be time-consuming and it can be very difficult when it comes to organizational issues as well. Moreover, this type of patients should have access to specialist care in the perioperative period. We are implementing a pilot project in our hospital which is designed to optimize the preparation process of the patients for bariatric surgery and shorten the waiting time for the surgery to 6 months.

Objectives

In this study we like to show short-term results of our pilot project. We considered such factors as weight loss 3 months after the procedure or reduction of comorbidities.

Methods

Study design was a cohort study evaluating bariatric patients operated on before the implementation of the above-mentioned project (first group) and patients who underwent surgery with the principles applied in the project (second group) in the period from January 2020 to March 2022.

Results

A total of 439 patients (69,2% of females and 30,8% of males) were included in the study. The first group of patients includes 235 patients, while the second group of 204 patients). In the first group the hospitalization time was 3 days ($p < 0,01$), while in the second group it was 2 days ($p < 0,01$). Also, the time of operation was shortened in the second group compared to the first one (60 vs. 65 minutes ($p < 0,01$)). The percentage weight loss before surgery was higher in the first group (3,64 vs. 2,27 ($p < 0,01$)).

Conclusion

Summing up, our study shows that the appropriate preparation of a bariatric patient for surgery can affect many factors, such as the time of hospitalization or the time of performing the surgery.

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SIGNIFICANCE OF TRIGLYCERIDES TO GLUCOSE INDEX FOR ASSESSING INSULIN RESISTANCE IN TYPE 2 DIABETES: DATA FOLLOWING METABOLIC/BARIATRIC SURGERY

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Background and aims

Recently glucose triglycerides index (TyG) is widespread used as surrogate marker of insulin resistance.

Methods

The accuracy of TyG after metabolic/bariatric surgery was evaluated in type 2 diabetes (T2DM) patients with T2DM remission (64 cases) and with a still abnormal fasting blood glucose (50 cases) at one year after biliopancreatic diversion (BPD).

Results

In the T2DM remitter and non-remitter subjects, body weight and BMI values were very similar at the baseline (99.7 vs. 98.1 kg, and 35.3 vs. 34.9 kg/m², respectively) and one year after BPD (82.8 vs. 82.1 and 28.7 vs. 28.9 kg/m², respectively), with a closely similar excess percent weight loss (48.5 vs. 42.2 %). At one year after BPD, TyG decreased in the remitters (9.75 vs. 8.68, $p < 0.001$), while in the non-remitters it remained substantially unchanged (9.79 vs. 9.44). Between the two groups, the preoperative mean TyG values were similar, while one year after BPD the remitters have lower mean TyG values ($p < 0.01$) than the non-remitters.

Conclusions

The results indicate that in the T2DM patients undergoing metabolic/bariatric surgery the TyG index cannot be considered a reliable marker of insulin resistance. TyG values were closely associated with the T2DM remission and the improvement of dyslipidemia after BPD. The hypothesis that in clinics the TyG index could be used as a parameter of ectopic fat accumulation can be taken.

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SINGLE ANASTOMOSIS DUODENAL SWITCH VERSUS ROUX-EN-Y GASTRIC BYPASS IN PATIENTS WITH BMI > 50 KG/M2: A MULTI-CENTERED COMPARATIVE ANALYSIS

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Background

Single anastomosis duodeno-ileostomy with sleeve gastrectomy (SADI-S) is a novel bariatric procedure associated with excellent short-term weight-loss results and comorbidity resolution. The long-term effectiveness and safety of SADI-S in patients with severe obesity have not been well elucidated.

Objectives

To evaluate and compare the safety and efficacy of SADI-S with Roux-en-Y gastric bypass (RYGB) in patients with a BMI > 50 kg/m².

Methods

We performed a multicenter retrospective review of patients with a BMI > 50 kg/m² who underwent RYGB or SADI-S between 2008-2020 to allow at least two years of follow-up. Patient demographics, peri- and post-operative characteristics were collected. Weight outcomes were reported in BMI and Percent Total Weight Loss (%TWL) at 6, 12, 24 and 60 months. A multivariate linear and logistic regression was used to evaluate continuous and categorical outcomes respectively. Data are summarized as mean ± standard deviation.

Results

A total of 463 patients (72.8% female, age 43.9± 12.4 years; BMI 57.6± 6.8 kg/m²) were included with a mean follow-up of 2.6± 1.7 years. Patients who underwent RYGB were more likely to have a history of sleep apnea, gastroesophageal reflux disease and hyperlipidemia (all *p*<0.001) (Figure 1). Patients who underwent SADI-S were younger (*p*=0.0011) and had a higher pre-operative BMI (*p*<0.001). The mean length of stay (LOS) was 3.9± 0.3 and 2.7± 0.2 days for SADI-S and RYGB respectively (*p*<0.001). The mean %TWL was 22.8, 35.5, and 40.5% for the SADI-S group, and 23.9, 31.9, and 31.8% for the RYGB group at 6, 12, and 24 months respectively (Figure 2). Complication rates were significantly higher for the SADI-S group (11.7% vs 3.5%) (*p*<0.001).

Conclusion

In our cohort, SADI-S was associated with higher and sustained mid- and long-term weight-loss results compared to RYGB for patients with BMI > 50 kg/m². However, LOS and early complication rates were also higher in the SADI-S group. Further studies are required to determine the long-term safety of SADI-S compared to other bariatric procedures.

Patient Demographics	Bariatric Procedure		Total (N=463)	p-value
	RYGB (N=343)	SADI-S (N=120)		
Age at procedure, years (SD)	44.9 (13.1)	41.4 (9.9)	43.9 (12.4)	0.0011 ¹
Sex, Female (%)	256 (74.6)	81 (67.5)	337 (72.8)	0.131 ²
Race, White (%)	315 (91.8)	80 (66.7)	395 (85.3)	< 0.001 ²
BMI Pre-op, kg/m ² (SD)	56.8 (6.1)	59.9 (8.2)	57.6 (6.8)	< 0.001 ¹
Obesity-related comorbidities				
Sleep Apnea (%)	255 (74.3)	56 (46.7)	311 (67.2)	< 0.001 ²
Hypertension (%)	189 (55.1)	68 (55.5)	257 (55.5)	0.088 ²
GERD (%)	183 (53.4)	26 (21.7)	209 (45.1)	< 0.001 ²
Hyperlipidemia (%)	174 (50.7)	34 (28.3)	208 (44.9)	< 0.001 ²
Diabetes Mellitus (%)	124 (36.2)	39 (32.5)	163 (35.2)	0.520 ²

¹Equal variance two sample t-test; ²Chi-Square test

Figure 1. Patient baseline demographics and comorbidities.

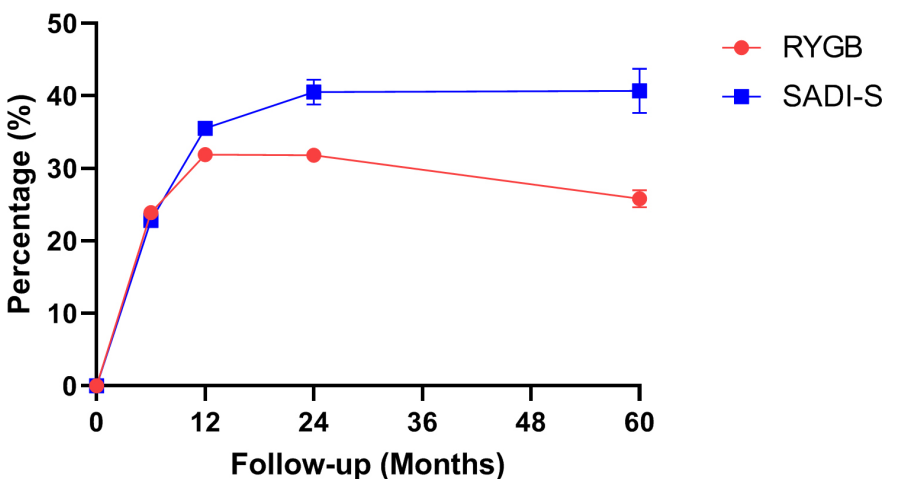


Figure 2. %TBWL follow-up after RYGB and SADI-S.

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SINGLE ANASTOMOSIS PROCEDURES (SADI-S VS OAGB-MGB) AS REVISIONAL FOR WEIGHT REGAIN AFTER SLEEVE GASTRECTOMY

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Background

Many revisional procedures are available for unsuccessful laparoscopic sleeve gastrectomy (LSG) in patients with complications or weight recidivism. Single Anastomosis Duodeno-Ileostomy (SADI-S) and One Anastomosis Gastric Bypass (OAGB/MGB) are two revisional procedures to address the problem of weight recidivism. The present study was aimed to compare the efficacy and outcomes of both surgical approaches in 91 patients at a single center.

Methods

A retrospective analysis of a prospective collected data base of patients who underwent SADI or OAGB/MGB as a revisional procedure for weight recidivism after primary LSG and followed for a minimum of one year was conducted. Patients in both study groups were compared in terms of weight loss, comorbidities resolution, nutritional deficiencies and complication rates.

Results

Ninety-one patients were included in the study (42 underwent SADI and 49 OAGB/MGB). A slight advantage in weight loss (total weight loss percentage, TWL %) at one year follow-up was observed for SADI when compared to OAGB/MGB (23.7 ± 5.7 vs. 18.7 ± 8.5 , $p=0.02$). However, this was comparable at 18 months follow-up (26.4 ± 7.3 vs. 21.2 ± 11.0 , $p=0.25$). Remission of comorbidities (diabetes and hypertension) and vitamin deficiency were similar in both study groups. Although OAGB/MGB had higher complication rate than SADI, the difference was not statistically significant (27% vs. 19%, $p = 0.39$). No mortality was reported in either of the study groups.

Conclusions

Both SADI-S and OAGB/MGB were effective revisional procedures to deal with weight regain post LSG with comparable outcomes in short term follow up. SADI-S procedure appears to cause less upper gastrointestinal complications and even looks a good option for patients suffering from GERD post primary LSG.

Keywords: Revisional surgery; sleeve gastrectomy; Single Anastomosis Duodeno-Ileostomy; One Anastomosis Gastric Bypass.

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SINGLE ANASTOMOSIS SLEEVE ILEAL (SASI) BYPASS AS A PRIMARY AND REVISIONAL PROCEDURE: A SINGLE CENTER EXPERIENCE

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Background

In order to achieve effective weight loss and remission of comorbidities, various surgical methods are used in the treatment of obesity. The most common procedures performed worldwide are followed by the newest ones.

Objectives

The aim of this study is to present the results of the first group of patients from a high volume bariatric center in central Europe and to compare SASI as a primary and revisional procedure.

Methods

We retrospectively analyzed patients who underwent SASI for obesity from December 2018 to June 2022 by the same team of surgeons. There were two groups of patients. The first group consist of patients who underwent SASI as their first bariatric procedure (primary group PG). The second group consisted of patients who underwent SASI after previous SG procedure due to weight regain and/or symptoms of GERD (revisional group RG).

Results

There were 15 patients (80% female) in PG, and 14 patients (88% female) in RG. The mean age was 40.3 years and 42.3 years, respectively. In the PG, the mean preoperative BMI was 40.1kg/m², LOS was 1 day, and the mean operating time was 84 minutes. In the RG the mean BMI was 36.6kg/m², length of hospital stay 1 day and the mean operative time was 81.3 minutes. The mean follow-up time was 26.9 months in PG and 17.1 months in RG. In the PG group, %TWL 12 and 36 months after surgery was 37.8% and 43.9% respectively. In the RG, %TWL 12 and 24 months after surgery was 13.8% and 20.9%, respectively. Most patients had complete remission of T2D and HT after surgery. In the RG, 9 (81.8%) patients had remission of GERD. The worsening of GERD was reported in 4 patients (40%) in the PG. There were no prolonged LOS or deaths in study group. There was one 30-day Clavien-Dindo Grade III complication.

Conclusions

SASI may be an effective and safe method of treatment of obesity. SASI may be an effective method of revisional bariatric surgery performed for GERD, but not for weight regain.

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SINGLE ANASTOMOSIS SLEEVE ILEAL BYPASS WITH 250 CM AND 350 CM ALIMENTARY LIMB: TO FIND THE BEST DECISION

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Background

Single Anastomosis Sleeve Ileal (SASI) bypass is a novel technique of metabolic/bariatric surgery in which a sleeve gastrectomy is followed by a side-to-side gastro-ileal anastomosis.

Objectives

The aim of this study is to evaluate the effects of SASI bypass on weight loss, metabolic effect of surgery, and development of complications.

Methods

We conducted a retrospective study of obese patients who underwent SASI bypass at a single institution between February 2017 and March 2022. Postoperative BMI changes, percent excess weight loss (% EWL), and complications were analyzed, as well as glucose and protein levels before and after surgery. Additionally, the effects of common channel length on weight loss and protein levels were studied.

Results

During the study period, 66 patients underwent laparoscopic SASI bypass, and 59 patients (89.4%) with completed follow-up were included in the study. The length of the common channel, counted from the ileocecal valve, was 250 cm in 30 patients and 350 cm in 29 patients. The mean age was 44.8 ± 9.53 years and the mean BMI was 47.6 ± 8.9 kg/m²; 27 of them (45.8%) had T2DM. The %EWL reached 79.8%, and all patients with T2DM had normal blood glucose levels one year after surgery. There were 3 early postoperative complications: 2 cases of postoperative bleeding and one case of rhabdomyolysis. One patient died 8 months after surgery, and alcoholic cirrhosis was diagnosed postmortem. We compared the results of SASI bypass in patients with different length of common channel (250 cm and 350 cm); BMI after surgery was 29.4 ± 5.3 and 30.8 ± 5.52 ($p=0.317$) in short and long alimentary limbs, respectively. The rate of hypoproteinemia was 10.16% (6 cases) and occurred in patients with 250 cm alimentary limb. Revisional surgery was performed in 3 of them, the length of the common limb was changed from 250 cm to 350 cm in 2 patients, and in one patient with refractory hypoproteinemia, the bypass was restored to normal anatomy.

Conclusion

SASI bypass is a novel operation with promising bariatric and metabolic effects. The lengthening of alimentary limb up to 350 cm can prevent hypoproteinemia without compromising weight loss.

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SINGLE PORT SLEEVE GASTRECTOMY: EXPERIENCE AFTER 3000 PROCEDURES

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Background

Single port access is routinely used in our department for performing laparoscopic sleeve gastrectomy (SPSG) as a treatment for severe obesity.

Objectives

The aim of this study is to present our experience and results after 3000 successive interventions.

Methods

Data from patients who underwent SPSG between August 2010 and December 2022 were extracted from a prospectively filled database and retrospectively analyzed. Patients with at least one year of follow-up were included for analysis of weight evolution and comorbidities.

Results

The median preoperative body mass index (BMI) was 44.6 kg/m² (34-88 kg/m²). The single port access was mainly positioned in the left hypochondrium. With experience, selected patients (25%) were able to benefit from a transumbilical approach. The median duration of the operation decreased from 112 min (50-360 min) in the period 2010-2015 to 75 min (45-150 min) in the period 2016-2022. An additional trocar was required in 4.9% of patients. Conversion to laparotomy was necessary at the beginning of our experience in a single multi-operated patient. The 30-day mortality rate was 0.03%. The rate of postoperative complications was 7.5% with 1.5% for bleeding or hematoma and 1.9% for fistula. The average excess weight loss at 1, 3, and 5 years was 71% ± 27%, 68% ± 26%, and 59% ± 29%, respectively. At 1 year, 73% of diabetic patients were in remission, 63% of patients with obstructive sleep apnea were no longer on Continuous Positive Airway Pressure (CPAP) ventilation, and 63% of hypertensive patients no longer required treatment. The rate of clinically proven incisional hernias was 3.9%.

Conclusion

Single port access laparoscopic sleeve gastrectomy can be routinely performed, especially using a left hypochondrium approach, with results equivalent to those of conventional laparoscopy. Transumbilical access is possible in selected patients.

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SINGLE-ANASTOMOSIS DUODENO-ILEAL BYPASS (SADI)-300 AS REVISIONAL BARIATRIC PROCEDURE FOLLOWING SLEEVE GASTRECTOMY: A CAREFUL INTRODUCTION OF MALABSORPTION IN PEOPLE WITH SEVERE OBESITY

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Introduction

Revision Single-anastomosis duodeno-ileal bypass (SADI) following sleeve gastrectomy (SG) has demonstrated significant excess weight loss (EWL) of up to 87% in 5 years, secondary to the introduction of a malabsorption component. Despite excellent bariatric results, the initial common channel (CC) of 200cm was associated with a high rate of malnutrition. To address this, a length of 300cm (SADI-300) vs a shorter duodeno-ileal distance of 250cm, was selected, given its better safety profile, regarding protein malnutrition and fat-soluble vitamin absorption.

Objectives

Retrospective analysis of our first case series and experience of the SADI-300 for the treatment of patients with severe obesity.

Methods

Between July 2017 and March 2020, 17 patients after SG with weight regain or as planned two-stage approach were selected for SADI-300. Main outcome measures were EWL and total body weight loss (TBWL). Secondary outcome measures were gastrointestinal symptoms (bowel motions/day, flatulence and steatorrhea)

Results

Out of 17 patients selected, 14 patients proceeded to SADI-300 and 3 were revised to one-anastomosis gastric bypass, because of severe duodenal adhesions. There were no intra or peri-operative complications. Mean weight at 12 months was 118kg (80-159kg) and mean BMI was 41.0 kg/m² (31.3-49.6 kg/m²) whereas at 24 months mean weight was 120.6kg (91.0-167.0kg) and mean BMI 42kg/m² (35.5-52.7kg/m²). Mean TBWL% was 26.8% (9.8-51.2%) and mean EWL% was 47.8% (17.9-78.2%). The mean additional TBWL% from SG to SADI was 9.0% (-5.5-24.0%) and EWL% was 15.8% (-6.7-58.6%) at 12 months. One patient was further converted to duodenal switch for poor outcome and two more were being considered. One patient had successful pregnancy one year post op. In terms of gastrointestinal symptoms SADI-300 was well tolerated with 1-3 reported motions/day and some excessive flatulence but no steatorrhea or diarrhoea. One patient reported constipation which was managed with dietary modification. Post-operative blood monitoring revealed no protein or fat-soluble vitamin malnutrition or deficiencies.

Conclusion

Our experience with SADI-S 300 as revisional procedure is promising. No morbidity, mortality or nutritional deficiencies were observed and side-effects were minimal. Overall additional weight loss was disappointing with some non-responders. We now employ and advocate and a shorter 250cm common channel.

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SINGLE-CELL TRANSCRIPTOMICS OF THE PANCREAS FOLLOWING BARIATRIC SURGERY USING ZUCKER DIABETIC FATTY RATS

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Background

Bariatric surgery results in the rapid recovery of glucose control within days following surgery. Although several theories exist regarding the mechanism of diabetes remission following bariatric surgery, we are still far from understanding it.

Objectives

With improvements in technology, single-cell measurements are able to reveal unsuspected subpopulations or new transcriptional mechanisms. Using the Single-cell RNA-sequencing (scRNA-seq) technique, we could discover high degrees of gene expression variability within each pancreatic endocrine cells, which have never been tested on bariatric surgery [10, 11]. Due to the difficulties in studying the changes of pancreatic endocrine cells in human bariatric populations, we use Zucker Diabetic Fatty (ZDF) rats as the experiment subject.

Methods

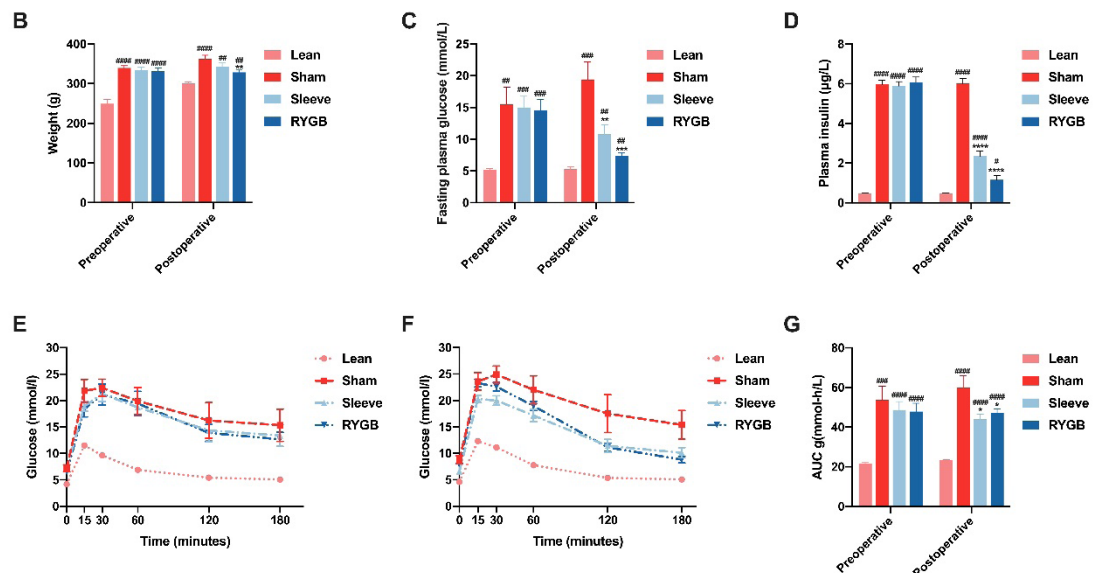
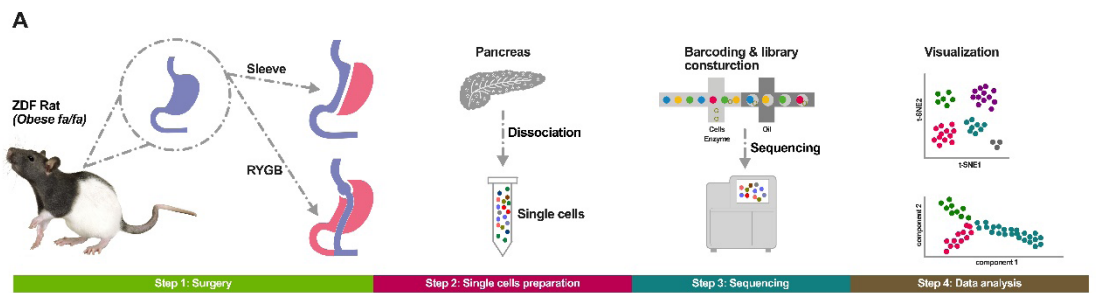
Zucker Diabetic Fatty (ZDF) rats with diabetic phenotypes were randomized into sleeve gastrectomy (Sleeve, n = 9), Roux-en-Y gastric bypass (RYGB, n = 9) and Sham (n = 7) groups. Two weeks following surgery, the pancreas specimen was further analyzed using scRNA-seq technique.

Results

Two weeks after surgery, compared to the Sham group, the metabolic parameters including fasting blood glucose, plasma insulin, and oral glucose tolerance test values were dramatically improved after RYGB and Sleeve procedures ($p < 0.05$). Compared with the Sham group, RYGB and Sleeve groups increased the proportion of β cells and reduced the ratio of α cells. Furthermore, we observed multiple upregulated and downregulated genes specific to each endocrine cell following bariatric surgery. Two multiple hormones-expressing cells were identified, the *Gcg+Ppy+* and *Ins+Gcg+/Ppy+* cells. The pancreatic *Ins+Gcg+/Ppy+* cells were defined for the first time and further investigation indicate similarities with α and β cells, with unique gene expression patterns.

Conclusions

For the first time, using the single-cell transcriptome map of ZDF rats, we reported a comprehensive characterization of the heterogeneity and differentiation of pancreatic endocrinal cells after bariatric surgery. The current study hopes to bring new ideas for research possibilities regarding the mechanisms of diabetes remission following bariatric surgery. Further research through functional validation studies will be needed.



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SLEEVE GASTRECTOMY – AN ANALYSIS OF PATIENTS NEEDING REVISION FOR LONG-TERM COMPLICATIONS

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Introduction

Sleeve gastrectomy (SG) remains the most frequently performed weight loss procedure globally. However, a subset of patients may require revision surgery for post-op complications. This study aims to explore the indications and characteristics of patients in this cohort and quantify the rate of revision surgery at a UK centre.

Method

All patients who underwent SG at a single centre from January 2016 to March 2018 were included in this study and followed-up for a minimum of 5 years. The indications and characteristics of all patients referred for revision surgery were analysed.

Results

A total of 217 patients (74.7% female, mode ASA 3, mean \pm -sd age 44.0 \pm -11.3 years, BMI 46.7 \pm -7.7 kg/m²) underwent a SG during this time period. All patients were followed-up for 72.7 \pm -7 months. Fifty-one (23.5%) patients developed post-op symptoms. Fifteen (6.9%) patients (85.7% female, mode ASA 3, 42.2 \pm -8.2 years old) underwent revision surgery (pre-SG BMI 42.1 \pm -8.6 kg/m², pre-revision BMI 33.4 \pm -8.0 kg/m²) to Roux-en-Y gastric bypass (85.7%) or one-anastomosis gastric bypass (14.2%) after an interval of 51.7 \pm -21.4 months. Revision was performed for reflux (85.7%), vomiting/ regurgitation (28.6%), dysphagia (14.3%), epigastric pain (7.1%) and a sleeve kink (7.1%). A further 38 (17.1%) patients also describe persistent post-op symptoms (reflux 70.3%, vomiting/ regurgitation 21.6%, dysphagia 16.2%, epigastric pain 5.4%) and are being considered for revision surgery.

Conclusion

In the long-term, a significant proportion of patients who undergo SG develop post-op symptoms with a subset requiring revision surgery. It is critical that this is impressed upon patients pre-operatively to allow valid informed consent.

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SLEEVE GASTRECTOMY AND GASTRIC BYPASS IN THE TREATMENT OF NONALCOHOLIC FATTY LIVER DISEASE IN CHINESE PATIENTS WITH OBESITY

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Background

Nonalcoholic Fatty Liver Disease (NAFLD) has become the most common chronic liver disease in the world in patients with obesity. Bariatric surgery can improve the degree of nonalcoholic fatty liver. Here we compared the effect of Sleeve gastrectomy (SG) and Roux-Y gastric bypass (RYGB) on NAFLD.

Objectives

The effects on weight loss, resolution of comorbidities, liver function tests and Aspartate aminotransferase/platelet ratio index (APRI) were compared between SG and RYGB.

Methods

A nonrandomized cohort of patients who underwent SG (68) and LSG (22) were followed up for 1 year.

Results

SG and RYGB had no significant difference in the remission rate of diabetes, hypertension and hyperlipidemia. RYGB improved total cholesterol (TC), triacylglycerol (TG) and Low-Density Lipoprotein Cholesterol (LDL-C) better than SG. The improvement of alanine aminotransferase (ALT), Aspartate aminotransferase (AST) and Aspartate Transaminase to Platelet Ratio Index (APRI) in LSG group was significantly better than in RYGB group ($p < 0.05$). RYGB significantly improved serum ALT, while APRI score and AST had no significant change at first year after surgery.

Conclusion

No significant difference between SG and RYGB was found regarding complications, change in BMI, remission of hypertension, diabetes and hyperlipidemia at 1 year after surgery. Both surgical procedures can significantly improve liver function in NAFLD. SG improve APRI better than RYGB in patients with NAFLD.

O-281**SLEEVE GASTRECTOMY PERFORMED BY PROCTORED SENIOR RESIDENT: IS IT SAFE?**

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Aim

Assess the residents' involvement in laparoscopic sleeve gastrectomy (LSG) and its consequences on post-operative outcomes.

Methods

A prospectively collected database was queried for LSG performed at our Center from January 2011 to December 2021. Revisional procedures have been excluded.

Results

During this decade, 1135 patients underwent a LSG at our Center, of which 1102 were included in the analysis: 970 operated by an expert bariatric surgeon (Group 1) and 132 by a proctored senior resident (Group 2). Operative time (OT) was significantly longer in Group 2 (75 vs 90 p<0,001), while post-operative ICU monitoring (ICU LOS) and length of stay (LOS) were comparable. Post-operative complications (POC) are similar between the two groups, in particular for Group 1 was 6.6% vs 9.8 % (p=0.449) of group 2. Leak rate (LR) was, respectively, 3.1% in Group 1 vs 1.5% in group 2 (p=0.416). No mortality recorded in the two groups.

Conclusions

LSG is an ideal procedure for training and safe if proctored by an experienced bariatric surgeon.

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SLEEVE GASTRECTOMY VERSUS ROUX-EN-Y GASTRIC BYPASS FOR TREATING OBESITY IN ELDERLY PATIENTS: 3-YEAR OUTCOMES OF A RANDOMIZED TRIAL

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Background

Despite growing data on bariatric surgery in elderly patients, most studies focus on surgical safety and short-term outcomes.

Objective

To evaluate long-term follow-up after bariatric surgery in patients ≥ 65 years.

Methods

Single-center randomized clinical trial comparing Laparoscopic Roux-en-Y Gastric Bypass (LRYGB) to Laparoscopic Sleeve Gastrectomy (LSG) in 36 elderly patients with obesity from September 2017 to May 2019. Three-year outcomes were evaluated based on weight loss, glycated hemoglobin and lipid levels, and micronutrient supplementation.

Results

Within 3 years follow-up, Total Weight Loss (%TWL) was $30.3 \pm 2.2\%$ after LRYGB compared to $17.2 \pm 2.2\%$ after LSG ($p = 0.001$). After LRYGB, HbA1c ($p < 0.001$), HDL ($p < 0.001$), LDL ($p = 0.007$), and triglyceride ($p < 0.001$) levels improved significantly. After LSG, a significant difference was only seen in HDL levels ($p = 0.004$). Adherence to micronutrient supplementation was significantly more frequent in the LSG group (72.2% vs. 22.2%, $p = 0.003$). Vitamin D decreased (26.8 ± 4.9 vs. 23.0 ± 2.0 , $p = 0.004$) and PTH increased (61.6 ± 5.8 vs. 80.2 ± 6.4 , $p < 0.001$) significantly after LRYGB, while remaining stable in LSG patients.

Conclusion

Bariatric surgery in elderly patients with severe obesity is effective throughout three years of follow-up. LRYGB has shown more significant weight loss and lipid and HbA1c levels control than LSG.

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SLIM-TOUPET STUDY: FUNDOPLICATION WITH GASTROPLICATION FOR SEVERE REFLUX ASSOCIATED WITH MILD OBESITY– PILOT CLINICAL SERIES

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Background

Gastroesophageal reflux (DRGE) associated with obesity has many challenges in choosing the right therapy. The Roux-en-Y Gastric Bypass (RYGB) should be performed with high effectivity for Class III obesity, but there is controversy about the treatment of patients with mild obesity with symptomatic reflux.

Objectives

The study proposes a new technique for treating DGRE and obesity in one step, by adding a greater curvature plication to the standard Toupet Fundoplication and started a pilot series for patients selected for the technique. All patients signed informed consent for the study.

Methods

Patients with symptomatic reflux disease, documented by endoscopy and /or pHmetry refractory to conservative therapy were treated using the technique. A classic laparoscopic Toupet fundoplication was performed, and an variation of the greater curvature gastric plication was added using non-absorbable sutures reaching to the antrum.

Results

Twenty-one patients were successfully submitted to the procedure with recovery of the symptomatology and weight loss, with a mean follow-up of 24 months. Mean operative time was 118 min, and patients recovered without postoperative complications. Mean postoperative stay was 2.1 days. Weight loss was very satisfactory, and initial BMI of 36.6 kg/m² dropped to 28,4kg/m² after 12 months. Control of comorbidities was also obtained in most patients.

Conclusion

Patients suffering from severe gastroesophageal reflux disease and obesity Grade I or II may be efficiently treated by this innovative procedure, avoiding a more radical bariatric procedure, while still maintaining sustained weight loss. Studies with larger series and longer follow-up are still needed to define the role of this therapy in managing patients with DRGE and mild obesity.

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SOCIODEMOGRAPHIC, PHYSICAL, PSYCHOSOCIAL AND BEHAVIOURAL FACTORS ASSOCIATED WITH EXCESS SKIN AFTER METABOLIC AND BARIATRIC SURGERY: A MIXED METHODS STUDY

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Université du Québec en Outaouais, Gatineau, Canada⁽¹⁾ - Ottawa University, Ottawa, Canada⁽²⁾ - Université du Québec en Outaouais, St-Jerome, Canada⁽³⁾ - Université de Sherbrooke, Sherbrooke, Canada⁽⁴⁾ - Université de Laval, Québec, Canada⁽⁵⁾ - Université de Montréal, Montreal, Canada⁽⁶⁾ - Université du Québec à Montréal, Montreal, Canada⁽⁷⁾

Background

Most patients have excess skin (ES) after metabolic and bariatric surgery (MBS), which can cause inconveniences. Identifying the factors associated with ES quantity and inconveniences is necessary to inform the development of interventions.

Objective

To identify sociodemographic, physical, psychosocial, and behavioural factors associated with ES quantity and inconveniences using quantitative and qualitative data.

Methods

A mixed method study with a sequential explanatory design, including 124 adults (92% women, $M_{\text{age}} 46.5 \pm 9.9$ years, $M_{\text{time post-MBS}} 34.2 \pm 27.6$ months) was conducted in 4 Canadian cities (Gatineau, Québec, Montréal, and Sherbrooke). During Phase I, ES inconveniences, self-reported sociodemographics, comorbidities, anthropometrics, body image-related outcomes, social support, quality of life, smoking, physical activity, weight, height, and ES on abdomen, arms and thighs were assessed. In Phase II, 7 focus groups were conducted with 37 participants from Phase I. A triangulation protocol was completed to identify convergent, complementarity, and dissonant results from quantitative and qualitative data.

Results

The quantitative data indicate no correlation between ES quantity and degree of ES inconveniences on the abdomen and thighs; however, ES quantity on arms was associated with the degree of ES inconveniences on the arms ($r=.36$, $p<.01$). Total ES quantity was associated with maximal body mass index (BMI) reached pre-MBS ($r=.48$, $p<.05$) and current BMI ($r=.35$, $p<.05$). In linear multivariate regression analyses, greater degree of ES inconveniences was associated with higher social physique anxiety and age ($R^2=.50$, $p<.01$). Four themes emerged from the qualitative data: “psychosocial experiences living with ES”, “physical ailments experienced due to ES”, “essential support and unmet needs”, and “beliefs of ES quantity causes”.

Conclusion

According to quantitative and qualitative data, ES inconveniences are not systematically related to ES quantity. Participant narratives supplemented this result by showing that this association could be influenced by the location of ES and situations where ES is exposed. Higher maximal BMI before MBS is associated with greater ES quantity after MBS in the quantitative and qualitative data. The statistically significant associations found between body image-related factors and ES inconveniences after MBS were supported by the participants’ narratives.

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SPANISH EXPERIENCE WITH LATERO-LATERAL DUODENO-ILEOSTOMY+SLEEVE GASTRECTOMY WITH MAGNET SYSTEM

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Background

A modification of single anastomosis duodeno-ileal bypass and sleeve gastrectomy (SADI-S) procedure by creation of side-to-side duodeno-ileostomy with GT Metabolic Solutions Magnetic Anastomosis System (MAGNET System) enables partial diversion of intestinal contents to facilitate achieving and maintaining weight loss and improving glycemic control in obese patients with or without type 2 diabetes mellitus.

Aim

Aim of this study is to report our experience and 180-day follow-up.

Methods

During the months of April to July 2022, 10 patients underwent primary Latero-Lateral Duodeno-Ileostomy and Sleeve Gastrectomy surgery with MAGNET System in Hospital Clinico San Carlos, Madrid, Spain. All patients underwent sleeve gastrectomy and two 3 cm magnets were placed intraluminally by endoscopy and laparoscopically assisted; the first was placed in the ligament of Treitz and then moved to the last 250cm of the ileum using magnetic laparoscopic device and the second was placed in the duodenum. Duodeno-ileal anastomosis was created progressively in the following days by fusion of both magnets and tissue necrosis between them. Patients were evaluated periodically by fluoroscopy and gastroscopy was scheduled after magnet expulsion.

Results

The mean age of the patients included was 48 ± 8.75 years and the preoperative BMI was 44.08 ± 3.29 kg/m². The mean operative time and median length of stay were 168 ± 43 minutes and 4(3-24) days. There were two cases with Clavien-Dindo I complication and one case with Clavien-Dindo III complication. The mortality rate was 0%. The first pass of contrast through the anastomosis on fluoroscopy was observed on day 17 and expulsion day of magnets was 42. The mean diameter of the anastomosis after 180D gastroscopy was 12.7x11 mm. One patient presented stenosis. The percentage of total weight lost at day 180 was $31.69 \pm 5.58\%$, the percentage of excess weight loss $62.3 \pm 14.45\%$ and improvements in glucose and lipid profiles were observed.

Conclusions

Latero-Lateral Duodeno-Ileostomy+Sleeve Gastrectomy with magnetic duodenal bipartition is a promising, safe and feasible technique and induces significant weight loss in obese patients and improvement of glycemic control. This modification of SADI-S could be considered as an alternative or previous step to a standard SADI-S procedure. However, larger studies are needed.

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STAGE DEPENDENT MANAGEMENT OF SLEEVE GASTRECTOMY LEAKS – A SYSTEMATIC REVIEW WITH PROPOSED CLASSIFICATION AND MANAGEMENT ALGORITHM

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Introduction

Gastric leak following foregut surgery remains a major challenge. Managing these deep/organ-space surgical site infections frequently involve a range of supportive, radiologic, endoscopic or surgical therapies. However, treatment algorithms vary between institutions depending less on patient factors than clinician/unit experience. Endoscopic and surgical therapies have been promulgated but not compared for efficacy nor their applicability to the differing scenarios encountered when treating these patients. Sleeve gastrectomy leaks are a useful “model” for the study of foregut leaks as the anatomic and physiologic conditions present are less heterogeneous than other forms of foregut surgery and because the high volume of surgery performed.

Objectives

We assess the efficacy of different treatments for sleeve gastrectomy leaks across the literature and our centre’s experiences, while attempting to implement an algorithm in managing sleeve leaks according to their severity as classified by a CT based staging system.

Methods

A comprehensive search of existing literature over the last decade was conducted using pre-defined criteria in accordance to PRISMA guidelines. Sleeve leaks were categorized according to severity, prior to analysing the efficacy of treatment methods.

Results

Following review of 1030 articles, 22 studies were included, involving a total of 719 sleeve leak patients. The mean age and BMI ranged from 33-46 years of age and 37-48kg/m², respectively. In type 1-2 leaks, surgical or radiological drainage followed by primary endoscopic therapy (stenting, internal drainage, OTSC clips, fibrin glue and/or E-VAC) were effective (leak resolution rates – 50-100% between reporting papers). Endoscopic therapy remains a viable treatment option in treating type 3-4 leaks with success rates ranging from 33-95%, although surgery (fistula-jejunostomy, Roux-en-Y bypass or total gastrectomy) may be required in chronic leaks where all other modalities have failed.

Conclusion

Management of sleeve leaks can be driven by the underlying leak pathophysiology. Defining variables such as the size of the defect, size of any abscess/collection and presence of a stenosis can allow differing options to be applied. Patients who fail to respond appropriately can be escalated to alternate therapies. Patients who do respond can be de-escalated to therapies that allow resumption of oral nutrition and potentially outpatient management.

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STANDARDIZED ASSESSMENT OF BARIATRIC SURGERY OUTCOMES: SWISS-FINNISH BARIATRIC METABOLIC OUTCOME SCORE (SF-BARI SCORE)

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Background

Standardized definition and reporting of bariatric surgery outcomes is not available for real-life clinical practice and science.

Objectives

To develop a clinically relevant and feasible bariatric surgery outcome score (Swiss-Finnish BARIatric Metabolic Outcome Score, SF-BARI Score).

Methods

SF-BARI Score is based on the evaluation of merged 5-year individual patient data (n=457) of two large randomized clinical trials (Swiss SM-BOSS and Finnish SLEEVEPASS) comparing laparoscopic sleeve gastrectomy with laparoscopic Roux-en-Y gastric bypass in the treatment of severe obesity. The main outcome is feasibility of SF-BARI Score and SF-BARI Score QOL (quality of life) as a tool to assess bariatric surgery outcome. The score includes percentage total weight loss (%TWL), four obesity-related comorbidities (type 2 diabetes, hypertension, dyslipidemia and obstructive sleep apnea), complications, and QOL, if available.

Results

Outcomes for SF-BARI Score were available for 435 (95.2%) and 398 (87.1%) patients at 1 and 5 years, for SF-BARI Score QOL in 289 (63.2%) and 318 (69.6%) patients, respectively. SF-BARI Score correlated strongly both with SF-BARI Score QOL and %TWL ($r=0.96$, 95%CI 0.95-0.96, $p<0.001$; $r=0.86$, 95%CI 0.84-0.89, $p<0.001$, respectively), but less with BAROS ($r=0.59$, 95%CI 0.51-0.65, $p<0.001$). Based on 5%, 25%, 75% and 95% percentiles, score outcomes were categorized as excellent, very good, good, fair and suboptimal response. There was a statistically significant difference in the score at 1 and 5 years (model based mean difference 4.0; 95%CI 1.4-6.6; $p=0.003$) and LRYGB had higher score compared with LSG (model based mean difference 7.4; 95%CI 3.4-11.5; $p<0.001$).

Conclusion

SF-BARI Score is a simple, relevant, and feasible composite tool to define and measure bariatric surgery outcomes enabling standardized reporting.

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STAPLE LINE REINFORCEMENT DURING SLEEVE GASTRECTOMY WITH SEAMGUARD: SINGLE CENTER RETROSPECTIVE CASE-CONTROL STUDY OVER A 5 YEARS PERIOD

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Introduction

Various techniques and reinforcements have been proposed over the years in order to prevent leaks and bleeding after Sleeve Gastrectomy (LSG). Aim of this study was to retrospectively compare staple line complications (SLC) rate in patients who underwent LSG with the use of bioabsorbable membrane (GORE® SEAMGUARD®, GoR) for staple-line versus those who received no reinforcement.

Methods

Data on all consecutive patients undergoing LSG between January 1st 2014 and December 31st 2018 were retrospectively reviewed. Patients were divided into two groups: GoR+ group if the SeamGuard (GoR) was used and GoR- group if no reinforcement was applied on the staple line. Preoperative demographics and rate of SLC were compared between groups.

Results

A total number of 626 LSGs were performed at our institution during the study period. GoR was applied in 450 (71.9%) cases (GoR + group) while NR was used in 176 (28.1%) patients (GoR – group). Two (1.13%) cases of leak and 2 (1.13%) cases of bleeding occurred in the GoR- group, while no SLC was recorded in patients who received GoR.

Conclusion

In our experience, no-reinforcement technique was associated with higher risk of staple line complications.

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STAPLE-LINE SUTURE REINFORCEMENT: COULD IT HELP CONTAIN THE LEAK?

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Background

Laparoscopic sleeve gastrectomy (LSG) is currently the most commonly performed procedure, accounting for 59.4% of all bariatric surgeries. The most fearsome complications are leaks and bleeding from the suture line. The rate of leak after LSG has been reported as high as 7% with an average rate of 2.4%.

Objectives

Staple line reinforcement (SLR) has been suggested as a mean of reducing the risk of sleeve leakage or bleeding. The aim of this study is to analyze if the suture reinforcement can be used to reduce the leakage rate after sleeve gastrectomy.

Materials and Methods

A total of 100 patients undergoing LSG between January and December 2022 at the University Hospital of Foggia, all performed and treated by the same experienced surgeon, were retrospectively assessed; the reinforcement technique was applied in 98 patients at the upper third of the staple line with barbed sutures (Suture Group). We compared these data with a group of 71 patients (Control Group) undergoing LSG between January and December 2021 without the employment of reinforcement technique.

Results

The study gathered 171 patients, 98 for the Suture Group and 73 for Control Group. The study includes 61 males (35,7 %) and 110 (64,3 %) females, with a mean age of 42,8 years (range: 18-65 years) and a mean body mass index of 47,5 kg/m². The mean operative time for the Suture Group was 53,9 ± 6,3 minutes while for the Control Group was 46,5 ± 8,2 minutes (p-value > 0,05). The upper third of the staple line was reinforced with barbed suture and in the Suture Group postoperative leakage occurred in 1 patient (1 %); in the Control Group we observed 3 cases of leak (4,1 %).

Conclusions

In the current literature there is insufficient evidence to support the routine use of suture-reinforcement techniques in laparoscopic sleeve gastrectomy, but our study highlighted a lower leakage rate in the group featured by the suture reinforcement. The collected data are still small, therefore it is necessary to continue the study to obtain more significant results.

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STEPPED CARE LONGITUDINAL SUPPORT ONLINE PROGRAM TO PREVENT WEIGHT GAIN AFTER BARIATRIC SURGERY: STUDY PROTOCOL AND 6-MONTHS PRELIMINARY RESULTS

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Background

APOLO_Bari Stepped-care Intervention (APOLO_Bari_SCI) is a novel, cost-effective and stepped-care intervention designed to optimize weight loss and prevent weight regain after bariatric intervention. It includes two different steps 1) low-intensity intervention (delivered by Facebook®), and 2) high-intensity cognitive-behavioral-therapy program (delivered in an online format). It lasts 18 months.

Objectives

To present an overview of the stepped-care interventions. To present the preliminary outcomes of 6-month efficacy data.

Methods

Bariatric patients were randomly assigned to the intervention group (IG = 141) that received treatment as usual and the APOLO_Bari_SCI, or the control group (CG = 121) that received TAU only. Participants' assessment included self-reported measures of pathological eating behavior, psychological impairment, negative urgency, emotional regulation, and self-criticism.

Results

The groups did not present significant differences at baseline on sociodemographic and clinical core variables. The SC_G had a reasonable adherence rate (68%) since of the 141 participants initially included in the intervention, 100 stayed as members in the Facebook® private group during the first 6 months. GEE analysis revealed a significant interaction effect between time and groups on measures of grazing behavior ($\beta = .343$, Wald $\chi^2 = 9.341$, $p = .002$), emotional eating ($\beta = .109$, Wald $\chi^2 = 8.304$, $p = .004$), and loss of control eating ($\beta = .130$, Wald $\chi^2 = 8.355$, $p = .004$) with groups presenting inverse trajectories across time: SG_C decreasing from baseline to 6-month follow-up assessment while CG increase. The same trajectory was found on negative urgency scores, although the interaction effect found was marginally significant ($\beta = .076$, Wald $\chi^2 = 3.791$, $p = .052$).

Discussion

Overall, the APOLO_Bari_SCI produced preliminary improvements in psychological factors that have a proven effect on weight loss maintenance after bariatric surgery. Testing the long-term efficacy will offer novel opportunities for clinical practice and future research.

O-291

SUITABILITY OF A WEIGHT LOSS DIGITAL THERAPEUTICS PLATFORM POST BARIATRIC METABOLIC SURGERY: A MULTIDISCIPLINARY PERSPECTIVE

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Introduction

Digital therapeutics is on the rise as an innovative approach to obesity by itself or complementary to bariatric-metabolic surgery. We did an extensive study of a platform put together out of the findings of the existing research body and agreed upon golden practices. This study aimed to assess the suitability of a digital therapeutic platform post-bariatric-metabolic surgery. The objective was to assess if such a platform is suitable for post-bariatric-metabolic surgery.

Method

This was a nonrandomized study of 391 participants from four countries, the USA, Canada, the UK, and Australia. Of these participants 59% were female and 41% were male. A digital therapeutic consisting of a special purpose of scale at the participants' premise, a mobile app to deliver guidance, education, motivation, accountability, and community support, an AI agent, human coaches, and a dashboard to manage the participants was used. Nutrition, diet, physical activity, and food journal took the central stage. The objective was to achieve at least 10% of weight loss in 24 weeks for the participants across all buckets. The participants were divided into 6 weight buckets. Our approach focused on: 1) dividing their long-term goals into weekly short-term goals and dynamically adjusting them based on their performance, 2) motivation, 3) customized guidance and education through AI and the weight loss coaches, and 4) accountability and community support.

Results

For weight bucket 166-181 Kg, the weight loss (wl) was 14.81% with SD, = 7.3, for weight bucket 146-165Kg, wl 12.53%, SD, = 6.8, for bucket 126-145 Kg, wl 14.50% with SD, = 5.9, for bucket 106-125Kg, wl 14.0 % with SD, = 5.2, for bucket 86-105Kg, wl 14.20% with SD, = 4.4, for bucket 65-85 Kg, wl 13.29% with SD, = 3.4.

Conclusion

An evidence-based, well-designed digital therapeutic with proper guidance through AI and human coach, motivation, and accountability can achieve more than 10-15% weight loss in 24 weeks. It's a promising technological platform for post-op bariatric-metabolic surgery.

O-292

SURGICAL MANAGEMENT OF PROTEIN MALNUTRITION POST BILIOPANCREATIC DIVERSION WITH DUODENAL SWITCH, 20 YEARS EXPERIENCE

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Background

Biliopancreatic diversion with duodenal switch (BPD-DS) provides excellent metabolic outcomes and weight loss. However, one of the most significant complications of BPD-DS is protein malnutrition which can require surgical revision.

Objective

The goal of this study is to describe the surgical management of protein malnutrition, effectiveness, and complication rate.

Methods

This is a single-Center, retrospective review of all patients who required surgical revision for protein malnutrition after BPD-DS between 2000 and 2021. Data were obtained from our prospectively maintained electronic database and are reported as a Mean \pm standard deviation.

Results

During a 21-year period, 121 patients required surgical revision for protein malnutrition, out of 3681 patients who underwent BPD-DS during the same period (3.2%). The mean age of the patients was 44 ± 10 years, 67% were women with an initial weight of 141kg and BMI of 51 ± 10 kg/m². Thirty patients (25%) had a feeding jejunostomy, seventy-one patients (59%) had an elongation of the common channel at the expense of the biliary limb, and nineteen patients (16%) required a complete reversal of their intestinal bypass (duodeno-duodenal anastomosis). BMI at the time of revision was 25 kg/m² and increased to 28 kg/m² at 10 years. The initial albumin was 41 g/L (normal range 35-45g/l), at 31 g/L before revision and increased to 36 g/L after surgical revision, 109 patients remained with albumin 35 and above with success rate of reversal up to 90%. The mean weight regain following feeding jejunostomy was 5 ± 3 kg, following elongation of the common channel was 10 ± 6 kg, and following complete reversal of intestinal bypass was 25 ± 14 kg. Hospital stay was 8 ± 9 days. Major 30-days complications occurred in 5.0 % (n = 6) of the patients and minor complications in 4 % (N = 5).

Conclusion

Surgical revision for protein malnutrition can be required following BPD-DS surgery but is relatively uncommon, with a 3.2% rate at 20 years. The type and extent of surgical revision should be tailored to the level of malnutrition, risk of malnutrition recidivism and risk of weight regain.

O-293

SUSTAINABLE WEIGHT LOSS: A RISK PROFILE FOR A NEGATIVE BODY IMAGE OF THE BARIATRIC PATIENT

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Background

Bariatric-metabolic surgery can help patients with severe obesity lose weight and reduce comorbidities. Unfortunately some patients experience insufficient weight loss, weight gain, and persistent comorbidities. A persisting negative body image after surgery can contribute to this insufficient weight loss and postoperative weight gain. Identifying bariatric patients who have a negative body image is a first step towards being able to improve preoperative care for this group at risk of unsatisfactory outcomes and aiming for more influence on sustainable outcomes after bariatric-metabolic surgery.

Objective

This study aimed to identify a risk profile for preoperative negative body image in bariatric patients.

Methods

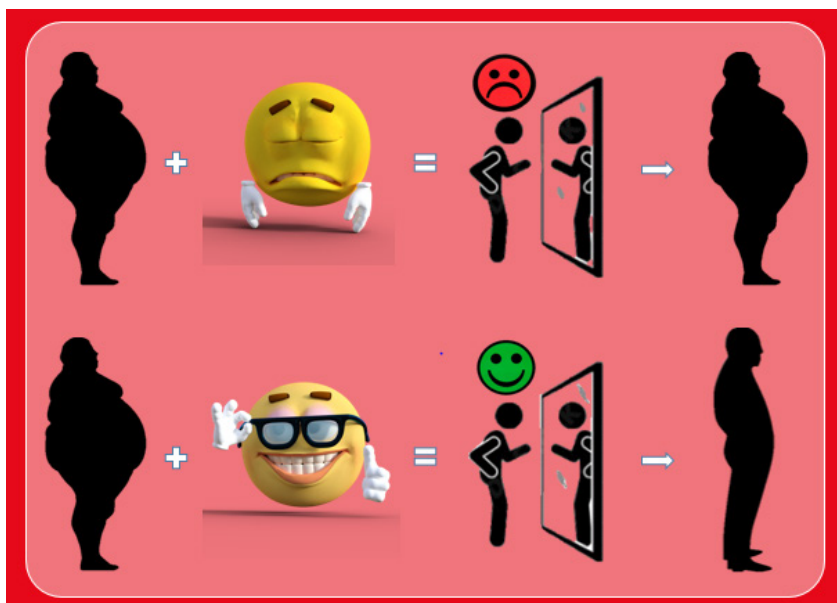
The study involved 339 patients eligible for bariatric-metabolic surgery who completed three validated questionnaires on body image (Obesi-Q), emotional eating (NVE), and psychological distress (SCL-90) before surgery. Multivariate logistic regression was used to determine whether the variables age, gender, BMI, emotional eating, and psychological distress had predictive value and whether a risk profile could be identified.

Results

Of the participants, 83.8% had a negative body image. A higher age was associated with a more positive body image in men ($r=.482$; $p<0.01$; $N=78$), while in women, a higher age was associated with a more negative body image ($r=-.130$; $p<0.05$; $N=261$). Emotional eating ($r=-.278$; $p<0.01$; $N=339$) and psychological distress ($r=-.370$; $p<0.01$; $N=78$) correlated significantly with body image, leading to a more negative body image. The degree of psychological distress was significant ($p<0.001$) and the only variable that had predictive value for preoperative body image.

Conclusion

Psychological distress increases the risk of having a negative preoperative body image in bariatric patients. It is important to inquire about body image and expectations regarding body image after bariatric surgery during preoperative screening, particularly in patients with a high degree of psychological distress. Adjusting expectations through psychoeducation may result in a lower chance of postoperative weight gain. Psychoeducation may be used to adjust expectations and reduce the chances of postoperative weight gain.



O-294

SWALLOWABLE INTRAGASTRIC BALLOONS: FIRST ARGENTINIAN EXPERIENCE

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Background

Swallowable balloons are innovative devices for the treatment of obesity. Endoscopy or anesthesia for implantation is not required. They are generally well tolerated and experience reports satisfactory results in relation to weight loss. The objective of this study was to analyze the first experience with the implementation of a swallowable balloon in Argentina.

Methods

It is a descriptive retrospective observational study on the treatment of obesity in patients who underwent swallowable balloons in Argentina, admitted to one center, in a period time of 26 months with a follow-up of 6 months.

Results

A total of n = 290 patients were recruited between June 2021 and february 2023, 71% were women and 29% men. The average age was 39 years. Average body mass index was 31.5 kg/m². Balloon implantation was performed with complete swallowing by the patients in 19.4% of the cases, swallowing with operator assistance in 55.5%, and swallowing with stylet assistance in 25%. The adverse effects reported were abdominal pain (80%), nausea (60%), vomiting (38%), headache (36%), gastroesophageal reflux (29%), constipation (11%), and diarrhea (7%). No deaths were reported. A mean 4-month weight loss of 12,3% was reported. 3 underwent early removal due to symptoms. 2 were removed due to rupture of the catheter during its extraction.

Conclusion

Swallowable balloon for the treatment of obesity is effective, safe, and well tolerated. Adverse effects are not severe.

O-295

TELEPORT YOUR RESIDENTS TO THE OPERATING ROOM FROM ANYWHERE: LIVE STREAMING SURGERY OF SLEEVE GASTRECTOMIES IN IMMERSIVE VIRTUAL REALITY

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Background

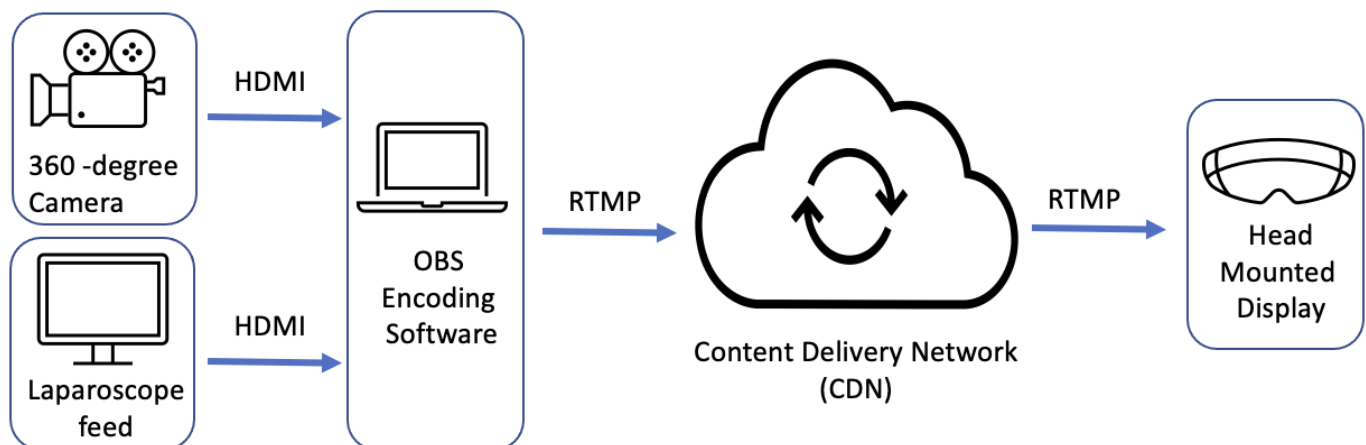
Prior studies have demonstrated the value of live streamed surgical procedures in surgical education, and that learning is further enhanced with the use of 360-degree video. Emerging virtual reality (VR) technology now offers yet another advancement by placing learners in an immersive environment, which can improve both engagement and procedural learning.

Objective

To evaluate a novel teaching platform that combines these modalities to offer live streaming of Sleeve Gastrectomy procedures in an immersive VR format.

Methods

Ten consecutive laparoscopic sleeve gastrectomy procedures were captured using an omnidirectional camera. This was combined with live video input from the laparoscope to augment the virtual environment with high quality operative views. Streaming was delivered using a paid content delivery network to enhance quality and decrease latency (Figure).



Results

Ten laparoscopic procedures were live streamed over a three-week period and successfully viewed by surgical residents in a remote location. Our live streaming setup was able to deliver high-quality, low-latency video directly to a VR platform, allowing complete immersion into the learning environment. The streaming platform was reproducible, cost-effective, and easily integrated into our standard operating room infrastructure.

Conclusion

Live streaming surgical procedures in an immersive VR format provides an efficient, cost-effective, and reproducible way to teleport remote learners from any location, directly into the operating room. This emerging technology offers a cutting-edge adjunct to surgical education. It allows more trainees to have direct exposure to surgical procedures, without encroaching on the practical and physical barriers associated with observing procedures in-person.

O-296

THE ACCEPTABILITY AND FEASIBILITY OF 3D RECONSTRUCTION AND VIRTUAL REALITY IN ADDRESSING BODY IMAGE IN BARIATRIC SURGERY

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Background

Patients living with obesity continue to experience body image dissatisfaction following bariatric surgery and massive weight loss. The reason for this is poorly understood, but may be due to unrealistic or unmet expectations. Negative body image perception, along with self-stigmatisation following metabolic surgery, leads to a recurrence of anomalous eating habits, resulting in poorer psychological and clinical outcomes.

Objectives

This pilot clinical study aims to establish whether three-dimensional (3D) reconstruction and virtual reality (VR) will be an acceptable and feasible method of providing psychological support to bariatric patients, improving their body image satisfaction and interventional outcomes.

Methods

We recruited 7 participants from a tertiary weight management service. Their 3D photograph was taken using a hand-held 3D scanning device and this was processed to produce two 3D reconstructed images with 15% and 25% weight loss. The participants were shown their images using VR and participated in a peer group workshops afterwards.

Results

6 out of 7 participants were retained until the end of the study. The common theme for participating was the hope it would provide them with motivation, realistic goals, and expectations of body image after bariatric surgery. 5 out of 6 participants agreed that the images provided them with a better idea of what they may look like 6-12 months after bariatric surgery. Furthermore, they felt better informed on how their body will change after massive weight loss, providing them with a more realistic expectation. All 6 participants strongly agreed with the group setting and felt the VR helped the group discussions on body image. Overall, all the participants felt the use of VR and 3D reconstruction would be beneficial in helping patients adjust to changes in their body image after bariatric surgery.

Conclusion

This is the first study to explore and demonstrate that 3D reconstruction and VR is an acceptable and feasible method of providing patients with a realistic expectation of how their body will change following massive weight loss, and potentially improving their body image satisfaction after surgery, as well as improving psychological and interventional outcomes.

O-297

THE BEST RESULT: HOW DO I GET IT

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Background

Three main considerations regarding current obesity treatment: the first is that obesity has had a rapid pandemic diffusion. It's associated with increased risk of adverse outcomes and overall morbidity and mortality. The second is that obesity surgery rapidly gained reputation as the most effective treatment. The third consideration is about the result we offer to our patient. Heading to "the best result", the distinctive target of my pathway of cure, we present our strategy and results.

Objectives

To get our innovative, rational "best result" namely a re-educated, no longer obese subject without side effects because of the adjustability and complete reversibility of Adjustable Gastric Banding (LAGB).

Methods

We propose the following pathway: an interdisciplinary team approaches the patients. The surgical target is to avoid over-treatments, propose safe, adjustable, reversible, sequential procedures to accompany our patients beyond their obese status and behavior. LAGB is the main surgical operation proposed in all the compliant patients. The complete deflation trains our patients to live without the procedure heading to the "best result" whenever possible.

Results

October '95-February '23. LAGB: 4266; follow-up 10 yy 72%, 15 yy 59%, 20 yy 61%; %EWL 50, 53, 60 after yy 10, 15, 20. March '21 U-February '23, 153 pts (126 F, 27 M; %EWL 80) accepted to be trained to live without their banding. Complete deflation, specific close team follow-up and interventions have been the key points to support and strengthen our "best result".

Conclusion

The exclusive "best result" has been evaluated in the group of gastric banding patients. The benchmarks of this reproducible experience are: 1) interdisciplinary team; 2) tailored, easily reversible operations; 4) a dedicated interdisciplinary team platform, "IGOT"; 5) complete, shared deflation to allow a free diet. The innovative "best result" is a relevant target to endorse gastric banding and to maintain a balance in our surgical slant.

O-298

THE BURDEN OF EMERGENCY RE-OPERATIONS POST BARIATRIC SURGERY: EXPERIENCE FROM A TERTIARY CENTRE

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Background

Although bariatric surgery is available through NHS, lack of funding and long waiting times, lead to patients choosing private care within UK or abroad. This study presents data on emergency re-interventions post bariatric surgery (UK and abroad) at a high volume centre in UK performing between 330-450 bariatric resections/year.

Methods

Data on all patients undergoing emergency intervention following bariatric surgery between Jan 2018 and Nov 2022 were collected.

Results

A total of 155 patients underwent 201 procedure after having had prior bariatric surgery of whom 79.7% were female. The median age was 43 (IQR 35-50 years) and the median BMI was 35 (IQR 28-45). Roux-En-Y Gastric Bypass (RYGB) and Gastric Band (GB) were the commonest index operations (40% and 24.5% respectively) and 22% had their index procedure outside of the UK. The commonest emergency interventions were OGD (n=13) and re-do jejunum-jejunal anastomosis(n=9). The median length of stay was 4 days (IQR 2-13) with mortality of 2%. Per year, the median number of patients admitted as an emergency was 34 (19-45). However, temporal regression analysis forecasts that admissions will steadily rise to 58 (95% CI 46-76) in 2023, 66 (95% CI 54-79) in 2024 and 75 (95% CI 62-88) in 2025 (p=0.013).

Conclusions

An increasing number of patients are attending our hospital having had surgery in either another unit or abroad. Mathematical forecasting models suggest that the number of patients will likely increase every year in the near future. With increasing demand, emphasis falls on the importance of established regional networks.

O-299

THE CLASH OF THE TITANS

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Background

Roux-en-Y Gastric Bypass (RYGB) is considered the *gold standard* treatment in obesity surgery, despite the increasing use of the Gastric Sleeve (GS). In existing clinical trials, the results are similar for both techniques, despite the empirical perception that RYGB is associated with greater weight loss and greater reversal of comorbidities. The objective of this work is the comparison of the two techniques in a real clinical setting.

Methods

It is a retrospective and descriptive analysis of patients undergoing laparoscopic RYGB and GS, in a level II hospital center, between January 2018 and September 2021. The main goal is to compare the weight loss of both groups. As secondary objectives, it is intended to evaluate postoperative complications and the evolution of comorbidities.

Discussion

The study included 167 patients, 96 (57.5%) submitted to RYGB and 71 to OS. The distribution by age (mean 46.5 years), gender, generic comorbidities, hypertension and type 2 diabetes mellitus was similar between both groups. Patients undergoing RYGB had higher BMI at surgery ($p=0.018$), higher ASA ($p=0.002$) and a higher probability of dyslipidemia ($p=0.034$), obstructive sleep apnea syndrome ($p=0.028$) and gastroesophageal reflux disease ($p<0.001$). There were no differences regarding the occurrence of postoperative complications ($p=0.313$). %EWL at 12 months was similar between both groups (83.96% in RYGB vs 83.15% in GS; $p=0.77$). In multivariate analysis, the type of surgery was not a predictor of weight loss ($p=NS$).

Conclusion

Despite the heterogeneity of the population studied and the possible selection bias, the data of the present study confirm the findings of the clinical trials. Up to 12m of follow-up there is no significant difference between both techniques for %EWL.

O-300

THE CLINICAL SIGNIFICANCE OF PRIOR BARIATRIC SURGERY IN PATIENTS HOSPITALIZED WITH ALCOHOL-RELATED LIVER DISEASE IN REGARD TO MORTALITY AND TRANSPLANT LISTING

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Background

Patients with a history of bariatric surgery (BS) are susceptible to developing alcohol use disorder, potentially resulting in liver failure in need of transplantation. These patients can develop severe alcohol-related liver disease (ARLD), often at a younger age and despite lower cumulative alcohol intake when compared to ALRD patients without BS. However, there is still a paucity of data.

Objectives

Our aim was to describe the demographics and mortality of a hospitalized population diagnosed with alcohol-related liver disease, in relation to BS.

Methods

We included patients hospitalized at the University Hospital in Ghent between 1/1/2018 and 31/12/2022 with ARLD. Data were retrieved retrospectively from the most recent hospitalization. Statistical analysis was performed using Mann-Whitney U and Chi² tests.

Results

12.3% (35/284) of patients admitted with ARLD had a history of bariatric surgery, of which 28 (80.0%) underwent Roux-en-Y gastric bypass. Patients with a history of BS were predominantly female (77.1%), in contrast to the non-BS population (30.1%) ($p < 0.0001$) and despite being significantly younger ($p < 0.0001$), had a similar survival (68.6% vs 61.0%) and a higher likelihood of transplant listing (25.7% vs 14.2%) ($p = 0.085$). The cause of death was acute-on-chronic liver failure in 77.8%, compared to 15.9% of those without a history of BS ($p < 0.0001$). Conversely, and in keeping with the younger age, no BS patients died of non-hepatological causes, in comparison to 31.7% of the mortality in the population without a history of BS ($p < 0.0001$). More than half of the BS cohort suffered from psychiatric illness, compared to a quarter of the non-BS population (51.4% vs 28.1%) ($p = 0.010$). The weekly amount of alcohol consumed during drinking periods (40.0 (25.0,50.0) vs 50.0 (35.0,79.0) units/week) ($p = 0.060$) and duration of use (8.0 (5.0,15.0) vs 20.0 (10.0,29.8) years) was significantly lower in the BS population ($p < 0.0001$).

Conclusions

BS patients hospitalized with ARLD are predominantly young females with lower cumulative alcohol consumption and a higher likelihood of transplant listing compared to those without prior BS. Despite this, mortality due to liver disease was higher. There is a need for prospective research to substantiate stricter pre-BS patient selection guidelines.

O-301

THE DEGREE OF PREOPERATIVE HYPOALBUMINEMIA IS ASSOCIATED WITH RISK OF POSTOPERATIVE COMPLICATIONS IN METABOLIC & BARIATRIC SURGERY PATIENTSLee Ying - Grace Chao - Joseph Canner - Jennifer Schwartz - Saber Ghiassi - Eric Schneider - Karen Gibbs*Bridgeport Hospital, Department of Bariatric and Metabolic Surgery, Bridgeport, United States***Introduction**

The incidence and impact of hypoalbuminemia in bariatric surgery patients is poorly characterized. We describe its distribution in laparoscopic sleeve gastrectomy (SG) and Roux-en-Y gastric bypass (RYGB) patients undergoing primary or revision surgeries, identify differences in preoperative characteristics, and measure postoperative complication risk.

Methods

Primary or revision SG and RYGB patients in the Metabolic and Bariatric Surgery Quality Improvement Program Participant Use Files from 2015 to 2021 were analyzed. Hypoalbuminemia was defined as Severe (< 3 g/L), Moderate (3-<3.5 g/L), Low-Normal (3.5 -<4 g/L), or Normal (4 g/L and above). Multivariable modeling using Poisson regression was performed to calculate the incidence rate ratios (IRR) of postoperative complications in patients with Severe, Moderate and Low-Normal albumin compared to those with Normal albumin after controlling for procedure, age, gender, race, BMI, functional status, ASA class, and operative length. Results are reported as IRR [95% CI].

Results

818,077 patients undergoing primary surgery and 70,256 patients undergoing revision surgery were analyzed. The prevalence of hypoalbuminemia was as follows: (Primary, Revision) Severe: 0.3%, 0.6%, Moderate: 5.2%, 6.5%, Low-Normal: 28.3%, 31.4%, Normal: 66.2%, 61.4%. Patients with hypoalbuminemia had more co-morbidities, including partial or total dependence status, insulin dependent diabetes, and renal insufficiency. Primary surgeries with Severe and Moderate hypoalbuminemia had a higher incidence rate ratio of unplanned ICU admission (Severe: 2.15 [1.62,2.85], Moderate: 1.22 [1.09,1.36]), sepsis (Severe: 3.6 [1.92,6.76], Moderate: 1.22 [1.09,1.36]), and 30-day readmission [Severe: 1.81 [1.57,2.10], Moderate: 1.25 [1.19,1.31] compared to cases with Normal albumin. Revision surgeries had higher rates of unplanned ICU admission (Severe: 2.43 [1.46,4.05], Moderate: 1.39 [1.07,1.81]), sepsis (Severe: 7.43 [4.15,13.31], Moderate: 1.76 [1.12,2.74]), and 30-day reoperation (Severe: 2.24 [1.57,3.19], Moderate: 1.21 [1.01,1.45]), and transfusion (Severe: 2.24 [1.57,3.19], Moderate: 1.21 [1.01,1.45]). Patients with severe hypoalbuminemia had higher rates of anastomotic leak ([Primary: 3.28 [1.23,8.76], Revision: 7.00 [2.58,19.02]).

Conclusion

Our in-depth analysis demonstrates an increased preoperative co-morbidity burden in patients with hypoalbuminemia and, as expected, a higher rate of postoperative complications with worsening hypoalbuminemia. Ensuring nutritional optimization, especially prior to revision surgery, is essential to improve outcomes in this challenging population.

O-302
THE EFFECT OF BARIATRIC SURGERY ON OVARIAN FUNCTIONS AND SEX HORMONES

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Background

It is known that obesity has negative effects on fertility. In our clinical experience, it is easier for women who cannot have children after bariatric surgery to become pregnant.

Objectives

We aimed to investigate the effect of bariatric surgery on ovarian functions and sex hormones.

Methods

Patients of reproductive age (18-45) who underwent Sleeve Gastrectomy were evaluated in terms of AMH, Androstenedione, DHEAS, Estradiol, FSH, LH, Testosterone, SHBG and other biochemical parameters before and 6 months after the operation.

Results

Total 48 patients who underwent sleeve gastrectomy. Median age was 31 (19-45), BMI 42.13 ± 6.81 (35-65). AMH 3.07 ± 2.64 ng/ml - 3.10 ± 2.54 ng/ml $p=0.46$, Total Testosterone 1.53 ± 0.85 nmol/l - 1.07 ± 0.4 nmol/l $p<0.001$, Androstenedione 1.87 ± 1.49 ng/ml - 1.75 ± 1.5 ng/ml $p=0.52$, Dehydroepiandrosterone sulphate 186.9 ± 92.9 micgr/dl - 184.6 ± 84.1 micgr/dl $p=0.8$, Estradiol 60.68 ± 52.8 pg/ml - 116.61 ± 69.41 pg/ml $p<0.001$, FSH 4.6 ± 1.9 mIU/ml - 5.1 ± 2.2 mIU/ml $p=0.19$, LH 5.9 ± 8.1 mIU/ml - 7 ± 10.1 mIU/ml $p=0.074$ before and 6 months after surgery, respectively.

Conclusion

While Sleeve Gastrectomy does not cause a change in AMH levels, which is closely related to ovarian functions. It led to a significant reduction in total testosterone levels.

O-303

THE EFFECT OF BOTULINUM TOXIN A ON LEPTIN, GHRELIN, INSULIN, GLUCAGON, AND OXIDATIVE STRESS IN DIET-INDUCED OBESITY RAT MODEL

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Background

Obesity treatments include dietary modifications, lifestyle changes, sports activities, and medical drug therapies. If none of these choices are viable, surgical intervention is contemplated. Botulinum toxin A (Btx-A), which inhibits the release of acetylcholine (Ach) causing temporary muscular paralysis, has been adapted to an extensive variety of therapeutic and cosmetic purposes and is currently being explored for use in the treatment of obesity. Both *in vitro* and *in vivo* investigations have demonstrated that Btx-A inhibits gastric smooth muscle contraction, therefore delaying gastric emptying time, and has a lowering impact on ghrelin, which stimulates appetite, suggesting it may offer a novel alternative in the treatment of obesity.

Objectives

The purpose of this animal model study was to see how botulinum toxin injection into the stomach affected body weight, insulin, glucagon, ghrelin, leptin, and oxidative stress products.

Methods

Three groups of 35 female Wistar Albino rats were created: botox group (n=15), control group (n=15), and sham group (n=5). All rats were given cafeteria food (CAF) for 70 days. The botox group received 20 international units (IU) of Btx-A after 70 days of feeding, 2.5 IU to each of the eight locations in the stomach. The control group received 20 IU of saline in the same way. The sham group only underwent laparotomy. All rats continued the CAF after surgery, and their weights were monitored every 3 days. The rats were killed on the 51st day, and their blood and white and brown adipose tissue samples were collected.

Results

In a diet-induced obesity rat model, Btx-A injection into the stomach did not affect weight reduction. However, the levels of insulin and ghrelin secretion decreased, while that of glucagon increased and that of leptin remained unaffected. Btx-A enhanced catalase expression but had little effect on oxidative stress indicators.

Conclusion

Btx-A administration had no impact on weight reduction in this animal model. Although it did decrease insulin and ghrelin production, increase glucagon secretion but have no effect on leptin levels.

O-304

THE EFFECT OF OBESITY ON RECURRENCE OF GASTROESOPHAGEAL REFLUX DISEASE AFTER LAPAROSCOPIC ANTI-REFLUX SURGERY: AN EVIDENCE-BASED SYSTEMATIC REVIEW AND META-ANALYSIS

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Background

Gastroesophageal reflux disease (GORD) is a common condition, with an incidence of up to 30% in western societies. Laparoscopic anti-reflux surgery (LARS) is effective in the management of this condition. Obesity is strongly associated with GORD and with the rising prevalence of obesity, there is therefore a concurrently increased frequency of LARS performed.

Objectives

We aim to review the outcomes of LARS in patients with obesity, including the recurrence of GORD symptoms and peri-operative complications.

Methods

A systematic review and meta-analysis was done for articles from multiple databases from June 1992 to June 2022. Literature was reviewed for outcomes of LARS in patients with obesity (BMI \geq 30). Eligibility criteria included specific BMI, study design, type of surgery, and outcomes. The recurrence of symptoms and peri-operative complications were assessed.

Results

A total of 35 studies were fully reviewed. Nine studies (five retrospective and four prospective) were selected for metanalysis using PRISMA flow, which included 1,499 patients with obesity and 5,521 without. Laparoscopic Nissen fundoplication was the most common procedure performed. The recurrence of symptoms was significantly lower in patients without obesity (p=0.0001). There was no statistically significant difference between patients with and without obesity in peri-operative complications, re-intervention, and early return to theatres.

Conclusion

A higher recurrence rate of GORD symptoms post LARS was reported in patients with obesity. Further research is required on how to decrease such risks and propose different methods, such as weight loss prior to surgery or R&Y Gastric bypass. Risks and benefits should be considered by clinicians prior to offering LARS to patients with obesity.

O-305

THE EFFECT OF OBESITY SURGERY ON NEWBORN ANTHROPOMETRICS IN WOMEN WITH AND WITHOUT POLYCYSTIC OVARY SYNDROME

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Background

Severe obesity treated with surgery and polycystic ovary syndrome (PCOS), are both conditions associated with an increased risk of intrauterine growth restriction of the offspring. We investigated whether offspring to mothers with PCOS who underwent obesity surgery for severe obesity had an increased risk of deviating birth anthropometrics.

Materials and methods

Observational study, including 162 offspring born to mothers with (n=48) and without PCOS (n=114), before and after obesity surgery. Data from two study databases were combined with data from patient's records from secondary and tertiary hospitals in Central Norway. To adjust for variations in gestational age and sex, z-scores for birthweight, birth length and head circumference were calculated, and pre- and post-surgery measures were compared.

Results

Mean \pm SD birthweight, birth length, and head circumference before and after surgery for offspring born to mothers with PCOS were 3987 ± 495 g vs 3396 ± 526 g ($P=0.001$), 52.2 ± 1.6 cm vs 50.1 ± 2.2 cm ($P=0.010$), and 36.3 ± 1.97 cm vs 35.3 ± 1.66 cm ($P=0.183$), respectively. In the non-PCOS group mean birthweight, birth length, and head circumference before and after surgery were 3859 ± 603 g vs 3490 ± 538 g ($P=0.001$), 51.3 ± 2.0 cm vs 49.9 ± 2.5 cm ($P=0.013$), 36.4 ± 2.0 cm vs 35.3 ± 1.8 cm ($P=0.016$), respectively. Birthweight post-surgery was similar in the PCOS group, 3396 ± 526 g compared to the non-PCOS group, 3490 ± 538 g (0.383), the same for birth length in the PCOS group, 50.1 ± 2.2 cm vs 49.9 ± 2.53 cm ($P=0.660$). There was no difference in head circumference, 35.3 ± 1.7 cm vs 35.3 ± 1.8 cm ($P=0.899$). When comparing PCOS and non-PCOS post-surgery using z-score, there was no difference in birthweight, ($\Delta-0.08$, $P=0.677$), birth length ($\Delta 0.21$, $P=0.184$) nor head circumference ($\Delta 0.14$, $P=0.476$).

Conclusion

Birthweight for offspring born to mothers with and without PCOS normalized following obesity surgery, and all birth anthropometrics was within the normal range. Obesity surgery may decrease the negative effect of PCOS in offspring birth anthropometrics.

O-306

THE EFFECT OF PROGRESSIVE RELAXATION EXERCISES ON BARIATRIC SURGERY PERIOD (PREBARI). PRELIMINARY RESULTS OF A PROSPECTIVE RANDOMIZED CONTROLLED CLINICAL TRIAL

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Background

The preoperative anxiety is an important factor that affects acute postoperative pain experience. Additionally, there is a relationship between preoperative anxiety and moderate to severe pain in the first 12 hours postoperatively. There is no data on this topic for bariatric patients.

Objectives

The goal of this study is to test the effect of the progressive relaxation exercises (PRE) in perioperative bariatric surgery patient care and postoperative pain status.

Methods

This study is a prospective randomized controlled clinical trial and registered on clinicaltrials.gov with an id number NCT05591898. The study protocol is approved by our local ethic committee (KAEEK/2022.01.7) Patients willing to have bariatric surgery in a tertiary hospital setting were enrolled to the study according to protocol. Participants randomly split into two groups and one of the groups learned how to do PRE preoperatively one month prior to the surgery and supported by registered nurses. Then, all participants filled Amsterdam preoperative anxiety and information score scale (APAIS) and State and Treat anxiety score (STAI) preoperatively. Visual analog score (VAS) data was collected postoperatively. These data were compared whether there is an effect of the PRE on preoperative anxiety and postoperative pain control.

Results

Totally 25 (F/M:21/4) patients were enrolled to study and still continues. The mean age and BMI of the patients were 46.5 ± 9.1 (39.5-84.4) and 35.4 ± 9.6 (18-55), respectively. There were no significant difference in terms of demographic data between two groups. No significant difference was found APAIS and STAI scores between two groups. There is a slightly low pain scores on behalf of PRE group ($p=0.05$) at 24th hour and it becomes significant on the 36th hour after the procedure ($p<0.05$).

Conclusion

PRE is a proven preoperative anxiety decreasing method and the effect on bariatric surgery population is unknown. Because of the early period of the trial, we only found a significant difference on VAS scores of the PRE group at the 24th and 36th hours after the procedure. To our knowledge, it is the first randomized trial on this topic and recruitment of the patients are still continue and results are emerging.

O-307

THE EFFECT OF THE BILIOPANCREATIC LIMB IN ROUX-EN-Y GASTRIC BYPASS SURGERY ON WEIGHT LOSS AND COMORBIDITY IMPROVEMENT AT 5 YEARS: A POPULATION BASED MATCHED COHORT STUDY

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Background

Surgeons performing Roux-en-Y gastric bypass (RYGB) carry out different limb length strategies. There is no consensus on what limb length strategy has the best outcomes. The biliopancreatic limb (BPL) is thought to play the largest role in achieved weight loss and related comorbidity resolution.

Objective

To compare weight loss and comorbidity improvement among patients undergoing RYGB with BPL ≥ 100 cm and BPL < 100 cm.

Setting

A population based cohort study using data derived from the Dutch Audit for Treatment of Obesity (DATO).

Methods

Patients that underwent primary RYGB and had registered follow-up at 5 years after surgery were selected from the DATO. Based on the BPL length, two groups were created and compared on outcomes: the long BPL group (i.e. BPL ≥ 100 cm) and the short BPL group (i.e. BPL < 100 cm). Propensity score matching was performed to correct for confounding by indication. Primary outcome was chance of achieving 20% total weight loss (TWL) at 5 years. Secondary outcomes included %TWL at 5 years and comorbidity improvement at 5 years.

Results

A total of 5,051 patients were identified, of which 3,779 underwent RYGB with short BPL and 1,272 with long BPL, and 2,528 patients were successfully matched. Median BPL length was 150 cm in the long group (inter-quartile range [IQR]: 150 – 150) and 70 cm in the short group (IQR: 50 – 75). At 5 years, long BPL did not increase the odds of achieving at least 20%TWL (odds ratio (OR) 1.20, 95% confidence interval (CI) [0.97 – 1.49], $P = 0.09$), however, absolute %TWL was higher (29.7% vs. 28.4%, $P < 0.01$). Furthermore, patients receiving long BPL had increased odds of achieving diabetes mellitus improvement (OR 2.17 [95% CI 1.31 – 3.60], $P < 0.01$) and hypertension improvement (OR 1.45, 95% CI [1.06 – 1.99], $P = 0.02$).

Conclusion

This nationwide population based study shows that primary RYGB with a BPL ≥ 100 cm has higher %TWL at 5 years, but does not result in higher odds of achieving 20%TWL. This accentuates that weight loss differences are small. When performing RYGB, the metabolic benefits of a long BPL should be taken into account.

O-308

THE EFFECTS OF BARIATRIC SURGERY ON TYPE 2 DIABETES AND HYPERTENSION IN KOREAN PATIENTS WITH OBESITY

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Background

The prevalence of obesity is increasing in Korean population regardless of age. And with increased obesity, patients who have chronic metabolic diseases have been increased continuously.

Objectives

This study was conducted to evaluate the clinical outcomes of bariatric surgery on chronic metabolic diseases, especially focusing on the remission of diabetes in Korean patients. We analyzed the efficacy of bariatric surgery for chronic metabolic diseases on patients with obesity.

Methods

We retrospectively reviewed patients with obesity who underwent bariatric surgery from 2007 to 2021 and conducted an online questionnaire survey to analyze the efficacy of bariatric surgery for chronic metabolic diseases on patients with obesity. We documented patients' demographics, comorbidities, body mass index before and after surgery, percent excess weight loss, changes of comorbidity condition. We compared patients in two groups according to their BMI; and the reference point of BMI was 35.

Results

A total of 321 patients were answered to the online questionnaire survey. Average BMI change was from 37 to 25 between 5 years. And average TWL was a maximum 32.53kg at postoperative 12 months. Most of chronic metabolic diseases including diabetes(84.4%), hypertension(79.6%), dyslipidemia(80.3%) and obstructive sleep apnea(92.4%) were improved after bariatric surgery. Diabetes(27.7% vs. 72.3%), hypertension(18.4% vs. 80.7%), dyslipidemia(31.7% vs. 67.7%) and obstructive sleep apnea(20.1% vs. 79.9%) were more improved in the high BMI group. Though, the overall trend did not show a statistical correlation between the BMI groups($p=0.331$, $p=0.158$, $p=0.55$, and $p=0.617$).

Conclusions

According to the results, it suggests good remission of chronic metabolic disease with the improvement of obesity in the bariatric surgical patients regardless of BMI. But the changes of comorbidity was not fully sufficient for adequate statistical relevance, additional study should be followed to assure this study results.

O-309

THE EFFECTS OF DIFFERENT TYPES OF INTRAGASTRIC BALLOON ON WEIGHT LOSS

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Background

Intragastric balloons are the most preferred methods non-surgical weight-loss methods. The effect of the balloons differs in terms of the gastric balloon's duration, not prefer sedation and the time to reach the ideal weight. This study was conducted to find the most suitable type of gastric balloon for patients.

Objective

Our objective on this research is to determine which type of balloon (1 year, 6 months, 4 months) is more effective in the process of reaching the ideal weight of the patients.

Method

The data was collected from 75 patients between June 2022-February 2023. The patients were divided into 3 groups which are a 1-year intragastric balloon, a 6-month intragastric balloon, and a 4-month swallowable balloon. Before the procedure, the patients' BMI were minimum 25.20 and maximum 50.30. (\bar{x} =33.76). After the procedure, it was minimum 18.60, maximum 44.80 (\bar{x} =28.60). Age's mean is 35. Data results were analyzed through SPSS program with Kruskal Wallis Analysis.

Results

There is no statistically difference between the pre-and post-procedure weight and BMI averages of the groups formed according to the type of balloon ($p>0.05$).

Table 1. Descriptive Statistics.

		preweight	Prebmi	Postweight	postbmi
1year	N	25	25	25	25
	Mean	99,10	34,88	81,53	28,70
6months	N	25	25	25	25
	Mean	88,79	32,48	75,04	27,49
4months	N	25	25	25	25
	Mean	95,08	33,91	82,90	29,59
Total	N	75	75	75	75
	Mean	94,32	33,76	79,83	28,59

Table 2. Test Statistics.

	Pre-weight	Pre-bmi	Post- weight	Post- bmi
KruskalWallis H	3,648	2,291	1,230	1,202
df	2	2	2	2
asympShallow.	,161	,318	,541	,548

Conclusion

As a result, there is no statistically difference between the pre and post-procedure weight loss and BMI averages of the groups. The reason of difference may be due to the small number of samples. The highest weight loss was observed in patients who had one-year balloon. The reason for this is that the balloon is adjustable and thus can be rearranged when the balloon cc does not reduce the person's food portion.

O-310

THE FUTURE OF PATIENTS WITH CLASS 2 OBESITY WITHOUT COMORBIDITY (A ONE-YEAR PROSPECTIVE FOLLOW-UP STUDY)

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Background

More than 30 years ago, the National Institutes of Health (NIH) issued a statement regarding the indications for Metabolic and Bariatric Surgery (MBS) and since then, many providers and insurance institutions in many countries use this statement as standard criteria for MBS.

Objectives

According to this statement, eligible for MBS are patients with severe obesity ($BMI \geq 40$) and patients with moderate obesity ($35 \leq BMI < 40$) with at least one major obesity related comorbidity. But the question is, what is the result of not burdening insurance institutions and providers to accept MBS in patients with obesity class 2 without comorbidities? Are these patients able to lose extra weight using non-surgical lifestyle modification methods?

Methods

127 patients with class 2 obesity ($35 \leq BMI < 40$) without comorbidities were followed for one year without undergoing bariatric surgeries. All patients were warned about their excess weight and advised to lose weight and modify their lifestyle and follow a proper diet. They were warned about the risks and complications related to obesity. After one year, all the patients were invited for re-consultation and their conditions were evaluated in terms of metabolic status and excess weight.

Results

Mean primary BMI was 37.2 Kg/m². At the end of one-year follow up, 104 patients were evaluated. During one year, 24 patients presented with $BMI \geq 40$ Kg/m² and underwent surgery. Mean BMI was 37.9 Kg/m² at one year. At the end of one year, 7 patients were newly diagnosed with type 2 diabetes, 11 patients were diagnosed with dyslipidemia and 6 patients with hypertension. At one year, a total of 21 patients (20.2%) had obesity related comorbidities. 11 patients reach $BMI < 35$.

Conclusion

Refusing insurance institutions and providers to accept patients with class 2 obesity without comorbidities, cause increase in body weight and BMI, as well as disturbance in metabolic status and adding obesity related comorbidity, instead of leading to lifestyle modification and weight loss. Also, a considerable number of patients return with higher BMI and new obesity related comorbidity seeking surgery, and finally, postponed surgery in these patients will probably be associated with more complications and weaker results.

O-311

THE HYPOTHESIS OF “SGLT1 BRIDGE” AS AN INDICATION TO “SURGICAL DIABETES”

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Background

Metabolic and Bariatric Surgery (MBS) faces the challenge of identifying indications for diabetic surgery. The definition of “surgical diabetes” refers to diabetes that can achieve complete remission following MBS. The conventional theories of the “enteroinsular axis (EIA)” and the “gut-brain-liver axis (GBLA)” are inadequate to explain the real mechanism of MBS in treating diabetes. Thus, the “SGLT1 Bridge” hypothesis was proposed, which states that the sodium-glucose cotransporter 1 (SGLT1) acts as an essential “bridge” to regulate the “EIA” and the “GBLA” effectively.

Objectives

We propose the hypothesis of “SGLT1 Bridge” as an indication of “Surgical Diabetes” to be preliminary validated in the present study.

Methods

An SGLT1 inhibitor (phlorizin) was used to mimic the effects resulting from Duodenojejunal bypass (DJB) in early-stage diabetic rats (ZDF rats) and non-obese advanced-stage diabetic rats (GK rats) representing different pathophysiological states. The rats were divided into groups according to glucose gavage with or without the SGLT1 inhibitor. We determined the expression of SGLT1, GLP-1R, key enzymes of gluconeogenesis, and blood indicators related to glucose metabolism. The effects of phlorizin were analyzed.

Results

Phlorizin effectively inhibited the activity of duodenal SGLT1 in both GK and ZDF rats ($p < 0.01$). The expressions of GLP-1R mRNA were down-regulated in the jejunum ($p < 0.01$) and up-regulated in the pancreas ($p < 0.05$) due to phlorizin in ZDF rats, but there were no regulation effects on GLP-1R mRNA in the jejunum and pancreas of GK rats. Phlorizin up-regulated Pck1 mRNA in the duodenum ($p < 0.01$) and the jejunum ($p < 0.05$), whereas down-regulated the hepatic G6Pase mRNA in ZDF rats ($p < 0.01$) but didn't regulate those in GK rats.

Conclusion

The findings of this study suggest that SGLT1 plays synergistic regulatory effects on the EIA and the GBLA, preliminarily validating the “SGLT1 Bridge” hypothesis. The differentially regulatory effects of SGLT1 on diabetic rats with discrepant pathophysiological conditions may provide potential indications involved in “Surgical Diabetes.” The “SGLT1 bridge” pathway may be crucial for improving glucose metabolism after MBS.

O-312

THE IMPACT OF BARIATRIC SURGERY ON CARDIOVASCULAR DISEASE IN PATIENTS WITH PULMONARY HYPERTENSION: A NATIONAL INPATIENT SAMPLE STUDY

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Background

Pulmonary hypertension (PH) is a condition characterized by a mean pulmonary artery pressure of over 25mm Hg at rest. It is closely linked to morbidity and mortality in patients with cardiovascular diseases. Previous studies showed the ameliorating effect of bariatric surgery on patients with PH. However, there is paucity of data regarding the effect of bariatric surgery on cardiovascular diseases in patients with PH.

Aim

In this study, we aim to evaluate the effect of bariatric surgery on acute myocardial infarction (AMI), coronary artery diseases (CAD), heart failure with reduced ejection fraction (HFrEF), heart failure with preserved ejection fraction (HFpEF), valvular heart diseases, Major Major adverse cardiovascular events (MACE), atrial fibrillation (AF), peripheral artery diseases (PAD), cardiac arrest, mortality, length of stay (LOS), and total hospital charges in patients with PH.

Methods

The national inpatient sample (NIS) data from 2016 to 2019 were analyzed by using ICD-10 codes. Multivariate linear and logistic regression was used to compare the outcomes by adjusting basal characteristics and comorbidities between bariatric and non-bariatric groups.

Results

The bariatric and non-bariatric groups consisted of 8143 and 822399 patients with PH respectively. In a logistic regression model, bariatric surgery was independently associated with a lower incidence of mortality (OR 0.834 (0.719-0.967 CI95%)), AMI (OR 0.651 (0.524-0.808 CI95%)), CAD (OR 0.865 (0.819-0.913 CI95%)), HFrEF (OR 0.666 (0.619-0.716 CI95%)), HFpEF (OR 0.807 (0.764-0.851 CI95%)), Heart valve diseases (OR 0.825 (0.782-0.860 CI95%)), PAD (OR 0.799 (0.707-0.903 CI95%)), MACE (OR 0.761 (0.697-0.830 CI95%)), and Cardiac arrest (OR 0.618 (0.483-0.791 CI95%)) (P-value<0.001 for all) in patients with PH. However, bariatric surgery was independently associated with a higher incidence of AF (OR 1.13 (1.08-1.19 CI95%)) (P-value<0.001 for all) in patients with PH. In addition, in a multivariate linear regression model, LOS and total charge were significantly lower in the bariatric group compared to the non-bariatric group in patients with PH (LOS: 13.66+0.14 vs 14+0.12 days and total charges 272325+25235 vs 273561+2185 us dollars respectively).

Conclusion

Bariatric surgery is independently associated with reduced mortality, LOS, total charges, and incidence of most cardiovascular diseases except AF in PH.

O-313

THE IMPACT OF BARIATRIC SURGERY ON MATERNAL, FETAL AND INFANT OUTCOMES: A POPULATION-BASED, MATCHED COHORT STUDY

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Background

Obesity during pregnancy is associated with a number of adverse pregnancy outcomes. Bariatric-metabolic surgery is the most effective treatment for weight loss and leads to reductions in many obesity-related comorbidities. Whether bariatric-metabolic surgery impacts pregnancy outcomes remains poorly understood.

Objectives

To examine associations between bariatric-metabolic surgery and maternal, fetal and infant outcomes.

Methods

This was a retrospective, population-based, matched cohort study. The data was obtained from multicentre, province-wide, linked administrative databases in Ontario, Canada. Patients included individuals with obesity who underwent bariatric-metabolic surgery and subsequently became pregnant from July 2011 to September 2017 matched to individuals in the same period who were eligible for bariatric-metabolic surgery but did not undergo surgery prior to their pregnancy. The primary outcomes were incidence of gestational diabetes, preeclampsia/HELLP syndrome, hemorrhage, severe perineal laceration, caesarean delivery, stillbirth/neonatal death, preterm birth, small-for-gestational-age, large-for-gestational-age, severe birth trauma, Apgar score at 5-mins<7, congenital malformation, and a composite of severe fetal/infant morbidity/mortality. Outcomes of interest were assessed by multivariable logistic regression.

Results

680 post-surgical individuals who subsequently became pregnant and 2002 non-surgical pregnant individuals with obesity were included in the analysis. A lower observed incidence of gestational diabetes was seen in the surgical vs. non-surgical group (8.7% vs. 18.8% respectively; OR 0.29, 95%CI 0.21-0.40, p<0.001). Preeclampsia/HELLP rates were lower in the surgical vs. non-surgical group (4.0% vs. 12.5% respectively; OR 0.20, 95%CI 0.13-0.31, p<0.001). The observed incidence of caesarean delivery was different between groups (35.9% surgical vs. 44.7% non-surgical group; OR 0.50, 95%CI 0.40– 0.63, p<0.001). Neonatal size was impacted by bariatric-metabolic surgery, with differences observed in small-for-gestational-age (15.7% surgical vs. 6.2% non-surgical group; OR 2.74, 95%CI 0.204-3.70, p<0.001) and large-for-gestational-age (6.5% surgical vs. 18% non-surgical group; OR 0.25, 95%CI 0.18-0.36, p<0.001). No associations between bariatric-metabolic surgery and severe adverse fetal/infant outcomes were observed. A lower observed rate of composite severe fetal/infant morbidity/mortality was seen in the surgical vs. non-surgical group (10.7% vs. 13.6% respectively; OR 0.73, 95% CI 0.54-0.97, p<0.05).

Conclusion

Bariatric-metabolic surgery was associated with a lower risk of several obesity-related adverse pregnancy outcomes, and was not associated with any severe adverse fetal/infant outcomes.

O-314

THE IMPACT OF DEPRESSION SYMPTOMS ON OBESITY: PRELIMINARY DATA ON A GROUP OF PATIENTS BEFORE BARIATRIC SURGERY

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Background

Symptoms of depression are strongly associated with obesity, especially with higher classes of obesity requiring bariatric surgery. A well-functioning of the parasympathetic nervous system has been found to be a health factor and considered a transdiagnostic marker of psychopathology. Dysautonomia has been found in both depression and obesity.

Objectives

This study investigates the impact of depression on obesity in order to structure treatment pathways to improve the psychological and physical quality of life of patients.

Methods

Sixty-seven patients with obesity [91% female; aged=42.8±8.2 years; BMI=45.74±5.74kg/m²] were recruited from the Pedro Ernesto University Hospital in Rio de Janeiro. During an outpatient visit before the bariatric surgery, patients filled out the Hospital Depression Scale (HAD), and the Beck Depression Inventory (BDI) to assess the depression symptoms. Thereafter, the LF-HRV, HF/RSA, and the RMSSD component of HRV were measured using the Faros 360° EKG Holter in a 5-lead configuration with a sampling rate of 1000Hz. Patients were fasting for at least two hours, were lying on the examination table, and the EKG recording duration was 15minutes.

Results

The relative risk of developing symptoms of depression patients with obesity classIII compared to patients with obesity class II is 1.471 (95%CI, 0.995 to 2.174). The odd ratio of symptoms of depression in patients with obesity class II vs patients with obesity classIII is 0.298, indicating a lower risk of developing depressive symptoms for patients with obesity class II compared to patients with obesity class III. Correlation analyses showed that parasympathetic activity, as measured by the LF-HRV, HF-HRV, RSA, and RMSSD, is statistically and negatively associated with symptoms of depression, as measured by the HAD scale and the BDI (Table 1).

Conclusion

This study is an initial phase of a longitudinal research project that assesses the psychophysiological health correlates of patients with obesity and undergoing bariatric surgery. Our preliminary results showed that depression is a factor hindering the health of our patients and should always be evaluated and treated carefully.

Table 1. Correlation analysis between depression and parasympathetic activity.

	HF	RSA	RMSSD	HAD	BDI
LF	.802**	.795**	.750**	-,319**	-.308*
HF		.987**	.827**	-,280*	-.283*
RSA			.793**	-,299*	-.279*
RMSSD				-0,227	-.243*
HAD					.719**

O-315

THE IMPACT OF POST-OPERATIVE METABOLIC ADAPTATION ON THE LONG-TERM WEIGHT TRAJECTORY AFTER BARIATRIC SURGERY

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Introduction

Bariatric surgery (BS) is the most effective treatment for severe obesity, but post-operative weight regain (WR) hinders its success in the long term. In this context, the aim of this study was to gain insight into the potential association between metabolic adaptation (MA), which refers to a reduced REE associated with weight loss not accounted for by changes in body weight or body composition and WR after BS.

Methods

Body composition by bioimpedance analysis (BIA), and resting energy expenditure (REE) by indirect calorimetry were measured at baseline (n=100), 2 months (n=31) and 12 months (n=46) after BS. Body weight was throughout the 3 years of follow-up (n=100), and WR was established as the % of body weight regained from nadir ($100 \times (W - W_{\text{nadir}}) / W_{\text{nadir}}$).

Results

MA (Kcal/day) was -338 [IQR: -458 to -170.4] (p-value<.0001) at 2 months and -456.2 [IQR: -558 to -335.8] (p-value<.0001) 12 months. WR at 2 years of 10%, 20%, 30% and 50% were 21%, 4%, 3% and 3%, respectively. WR at 3 years were 38%, 11%, 5% and 1% for same cut points. The MA at 12 months was statistically distinct between GPB (-401.3 Kcal/day) and SG (-568.9 Kcal/day), with p-value=0.0123.

Conclusions

Our data show that patients undergoing BS experience MA during the first year after surgery. Although it occurs in the two BS procedures MA after SG seems higher than GPB at 12 months. However, this statistical difference must be taken carefully due the limited sample size.

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THE IMPACT OF THE BOUGIE SIZE AND THE EXTENT OF ANTRAL RESECTION ON WEIGHT-LOSS AND POSTOPERATIVE COMPLICATIONS FOLLOWING SLEEVE GASTRECTOMY: RESULTS FROM THE SCANDINAVIAN OBESITY SURGERY REGISTRY

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Background

Laparoscopic sleeve gastrectomy (LSG) as a primary bariatric procedure has gained increasing popularity worldwide. However, controversies still exist regarding several operative aspects, such as the optimal diameter of the sleeve and the optimal distance from the pylorus to the edge of the resection line, and whether these aspects have effects on weight-loss results and the risk to develop postoperative complications.

Objective

The aim of this study was to compare weight-loss results and the incidence of postoperative complications between sleeve with different diameters measured in bougie size and with different distances from the pylorus to the edge of the resection line measured in centimeter.

Setting

Nationwide registry-based study.

Method

This study is an analysis of sleeve gastrectomy performed in Sweden between 2012 and 2019. Data were collected from Scandinavian Obesity Surgery Registry (SOReg). Patients with bougie size 30-32 and 35-36 and patients with distance from pylorus 1-4 cm, 5 cm, 6-8 cm were identified and compared regarding weight-loss results and the risk to develop postoperative complications.

Results

9,360 patients were included. Follow-up rate was 96% at day 30, 78.8% at one year and 50% at two years. Both bougie size 30-32 compared to 35-36 and distance from the pylorus 1-4 cm compared to 5 cm were associated with significant higher weight-loss at one and two years. No difference in the risk for early or late complications was seen between bougie size groups 30-32 and 35-36. Resection starting 1-4 cm from the pylorus compared to 5 cm was associated with higher risk for overall early postoperative complications (OR 1.46 (1.17-1.82, P=.001)), but there was no significant difference in the risk to develop late complication at 1 and 2 years. No difference in the leak rate and in the risk to develop stricture was seen between different Bougie sizes, nor distances from the Pylorus.

Conclusion

Using a smaller Bougie size and starting the resection closer to the pylorus was associated with better maximum weight-loss. Closer resection to the Pylorus, but not Bougie size was associated with increased risk for early postoperative complications after sleeve gastrectomy.

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THE IMPORTANCE OF FOOD ADDICTION IN PATIENTS WITH BINGE EATING DISORDER TWO YEARS AFTER SLEEVE GASTRECTOMY SURGERY

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Background

Food addiction (FA) and binge eating disorder (BED) are individually associated with negative outcomes after bariatric surgery (BS), but co-occurrence of these two disorders might represent a more severe subgroup among BS candidates. Few studies have assessed the prevalence of FA in BED patients and its long-term effects after BS.

Objectives

1) The presence of FA in patients with BED two years after LSG, 2) Association between serum levels of some minerals and FA in patients with BED, 3) Relationship between body composition outcomes and FA in patients with BED, two years after LSG.

Methods

120 patients with BED who had undergone LSG two years prior to the study were enrolled. BED was diagnosed using diagnostic and statistical manual of mental disorders, 5th edition (DSM-5) criteria that performed by trained clinical psychologists. FA was diagnosed using the Yale Food Addiction Scale (YFAS) questionnaire. Blood analysis included, photometric method for magnesium and iron, spectrophotometric for zinc, and immunoturbidimetry for ferritin, following standard laboratory procedures. Inform consent was obtained from all participants.

Results

FA was found in 50 of 120 patients with BED (41.66%) two years after LSG. Patients with FA had significantly higher weight ($p=0.01$), and FFM ($p=0.002$) compared to non-FA patients. Regarding weight and body composition changes, the patients with FA had significantly lower FM loss percentage (% of weight loss) ($p=0.04$) and a higher FFM loss percentage (% of weight loss) ($p=0.04$) compared to those without FA. When the absolute values of FM and FFM loss (kg) were compared, it was found that FA patients (vs. non-FA) lost more kilograms of FFM ($p=0.003$) through their weight loss program two years after LSG. Moreover, the patients with FA had significantly lower serum levels of Magnesium ($p=0.02$) and a higher level of ferritin ($p=0.04$) compared to those without FA.

Conclusion

The results of this study confirmed the concept that food addiction is important in BED patients after bariatric surgery because of its prevalence and its potential association with negative long-term outcomes following LSG. Thus, special attention should be paid to postoperative co-occurrence of BED and FA.

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THE INFLUENCE OF CLINICAL AND PSYCHOLOGICAL WELLBEING ON THE DECISION TO PROCEED WITH BARIATRIC SURGERY

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Introduction

With the increase in the obesity epidemic, bariatric surgery rates have escalated exponentially. Despite this, a large proportion of those referred for Bariatric consultation fail to follow through with surgery

Objective

To establish whether demographic and/or clinical parameters influence the decision to proceed with surgery in patients attending for a first bariatric surgical consultation in a private healthcare setting.

Methods

A retrospective case note and database review was carried out on a consecutive series of patients attending a single centre of excellence over a four-year period. All patients completed the psychological assessment tools - Beck Depression Index (BDI) and Hospital Anxiety Depression Score (HAD), prior to consultation. Demographic and clinical data were recorded and evaluated in the context of decision to proceed with or decline surgery.

Results

Between January 2017 and January 2021, 234 patients attended for an initial bariatric consultation and completed pre-consultation questionnaires. 172 questionnaires were available for subsequent assessment. Seventy four percent (128) were female. Fifty four percent (93) underwent subsequent surgery and the remainder did not proceed with the program. Private insurance cover had a significant influence on whether patients proceeded with surgery 81(80%) vs 13(12%), $p < 0.05$, Chi square. The overall BDI and HAD scores for the group were 14.63() and 6.34 (± 10.5), respectively, indicating moderate depression. Patients not proceeding with surgery had a significantly higher BDI [16.2 (± 10.1) vs 13.2(± 10.5), $p=0.04$] and HAD score [7.2 (± 4.6) vs 5.5(± 4.2), $p=0.01$] than those who ultimately proceeded to surgery. There were no other associations between clinical parameters and subsequent surgical intervention.

Conclusion

Unsurprisingly private insurance cover has a significant influence on the decision to proceed with bariatric surgical intervention, reaffirming that a much larger number of severely obese patients would likely undergo surgery if it were within their financial remit. Patients who decline subsequent bariatric surgical intervention have significantly higher initial depression and anxiety scores, suggesting a possible benefit for early psychological/psychiatric intervention in this group.

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THE INFLUENCE OF PREGNANCY ON LONG TERM WEIGHT LOSS AFTER PREVIOUS BARIATRIC SURGERY

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Introduction

Few studies have analyzed the impact of pregnancy on weight loss after bariatric surgery. The aim of this study is to evaluate the effects of post-operative pregnancy on excess BMI loss percentage (EBMIL%) after laparoscopic Sleeve Gastrectomy (SG) and Roux-en-Y Gastric Bypass procedures (RYGB).

Methods

A retrospective study was conducted with 194 female patients of reproductive age between 20 and 40 years old whom underwent SG and RYGB performed at our institution between January 2017 and December 2018. A comparison of the results at 4-year follow up was performed between patients who became pregnant after bariatric surgery with patients who did not. We excluded patients who did not have 4-year follow up, revisions, conversions, and patients who were pregnant at the time of surgery. Outcomes included median weight before and after surgery, median BMI after surgery, and mean EBMIL% after surgery. These were then stratified for comparison between the two groups.

Results

Among 194 total cases, 35 (18.0%) patients became pregnant within a 4-year follow up period, and 159 (81.9%) patients did not. Out of the pregnant patients, 26 (74%) underwent laparoscopic SG while 9 (24%) underwent laparoscopic RYGB. Out of the non-pregnant patients, 136 (86%) underwent laparoscopic SG while 23 (14%) underwent laparoscopic RYGB. The median post-operative BMI in the pregnant group was 33.3 kg/m² (IQR 30 - 38.9) and 33.5 kg/m² (IQR 28.9 - 38.6) in the non-pregnant group. The mean EBMIL% within a 4-year follow-up in the pregnant group was 49.9% (SD 23.6) and 55.5% (SD 30.4) in the non-pregnant group. The median weight before surgery in the pregnant group was 112 kg (IQR 105.7 - 130) and 117 kg (IQR 106-132) in the non-pregnant group. The median weight after surgery in the pregnant group was 89.8 kg (IQR 79.4 - 108) and 88.9 kg (IQR 78 - 103) in the non-pregnant group. There was no significant difference between the groups' outcomes.

Conclusion

The mean EBMIL% within a 4-year follow up after laparoscopic SG and RYGB had no significant difference between patients who became pregnant post-operatively and patients who did not.

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THE NEED FOR STANDARDISED POSTOPERATIVE CARE FOR PATIENTS UNDERGOING BARIATRIC AND METABOLIC SURGERY IN THE UK

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Background

The increasing use of Enhanced Recovery After Surgery (ERAS) means the development of protocolised pre-, intra- and post-operative care according to available best-evidence. There is limited consensus on the ‘best’ early postoperative management of patients undergoing bariatric and metabolic surgery (BMS).

Objectives

This survey aims to assess for consistency in patient care and review early post-operative practices of NHS BMS units across England.

Methods

Bariatric nurse specialists from all UK bariatric units were invited to complete an anonymised, online survey from 21st December 2022 to 21st February 2023.

Results

81% (30/37) units completed the survey. ERAS protocols are implemented in 66.7% (20/30) units. A pre-set analgesia and anti-emetic bundles are prescribed in 63.3% (19/30) units. In 56.7% units (17/30), thromboprophylaxis is routinely given on the day of surgery postoperatively. However, total duration of thromboprophylaxis is variable. 76.7% (23/30) units refer to a premade protocol when deciding on postoperative oral intake. 16.7% (5/30) units encourage free fluids several hours after surgery. 60% (18/30) units perform postoperative day 1 bloods. 36.7% (11/30) units use predefined protocol when deciding patients’ fitness for discharge. In 50% (15/30) units, patients are discharged one day after surgery. 86.7% (26/30) units routinely prescribe proton-pump inhibitors for at least 30 days after surgery. However, ursodeoxycholic acid is only prescribed in 10% units (3/30).

Conclusion

This study shows that there is currently limited usage of bariatric ERAS, and where it is used there is variability in the post-operative care. This potentially highlights a need for national bariatric ERAS guidelines, to facilitate provision of evidence-based, best-practice post-operative care.

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THE POSE-2 PROCEDURE FOR OBESITY: A SAFE AND EFFECTIVE TREATMENT OPTION

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Background

The range of treatment options for people with obesity is growing. Besides lifestyle interventions, medication and surgery, endoscopic options are becoming part of the current treatment landscape. With the POSE (primary obesity surgery endoscopic) endoluminal folds are created in the stomach with full-thickness sutures. More recently, the modified version, the POSE-2, is introduced in clinical practice.

Objectives

This study aims to evaluate the safety and effectiveness of the POSE-2 procedure in patients with obesity after one year.

Methods

All patients treated with the POSE-2 procedure between march 2019 and November 2022 in our center were included in this retrospective data study. Inclusion criteria consisted of age of >18 years old and a BMI 30-40 kg/m². Patients with esophageal or gastric abnormalities or malfunction, previous surgery on the gastrointestinal tract, moderate to severe reflux disease, hiatus hernia or current pregnancy were excluded.

Results

50 patients were included of which thus far 46 have reached the 12-month endpoint. The study group consisted of 87% female patients, with a mean age of 45.6 years old and a mean BMI of 34.5 kg/m². Weight change was evaluated at 3, 6 and 12 months and was 12.0%, 13.81% and 14.9% respectively. During the procedure, 13.4 anchor sutures were used on average in a mean procedure time of 52.9 minutes. All patients except one were discharged from the hospital on the same day. Postprocedural complaints consisted of nausea and vomiting (37.0%), and pain (57.8%). No complications were recorded in this group. The mean number of days before patients returned to work was 5.67. Most patients (95.7%) reported feeling satisfied between meals.

Conclusion

The POSE-2 procedure can be used as a safe and effective treatment for people with obesity. The current study presents a positive effect on weight reduction and no complications after one year of follow-up.

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THE PREDICTIVE VALUE OF ZUNG SELF-RATING DEPRESSION AND SELF-RATING ANXIETY SCALE IN EVALUATING EARLY WEIGHT LOSS OUTCOME FOLLOWING SLEEVE GASTRECTOMY

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Background

Depression and anxiety are closely related to obesity, and as bariatric surgery is growing in popularity in China, we need to understand better whether depression and anxiety could adversely affect the weight loss outcome of bariatric surgery.

Objectives

To understand better whether depression and anxiety could adversely affect the weight loss outcome of bariatric surgery.

Methods

Patients' data from 2021 July to 2022 March who performed sleeve gastrectomy as primary surgery at our hospital were analyzed. The depression and anxiety scores were obtained using the Zung Self-rating Depression Scale (SDS) and Self-rating Anxiety Scale (SAS) assessment tools. This study's main variables were the preoperative and postoperative weight at 1-year and the percentage of total weight loss (%TWL).

Results

Eighty-three patients were included for this study; fifty of them were female. At postoperative 1-year, the %TWL for patients with a normal depression range was $35.3 \pm 9.0\%$, mild depression was $31.3 \pm 9.9\%$, and moderate depression was $26.4 \pm 4.2\%$. Meanwhile, the %TWL for patients with normal anxiety levels was $34.2 \pm 10.3\%$, with moderate anxiety levels was $32.4 \pm 4.7\%$ and with severe anxiety levels was $25.2 \pm 4.2\%$. Patients with preoperative moderate depression and severe anxiety levels had significantly lower %TWL compared to those with normal scores, respectively (p-value <0.05).

Conclusions

SDS and SAS scoring system might have a predictive value in evaluating the weight loss outcome following sleeve gastrectomy. Studies with a larger sample and longer postoperative period should be aimed in the future, focusing on associating them with their SDS and SAS score.

Table 1. Weight loss outcome according different SDS score.

	Normal (n=40)	Mild (n=24)	Moderate (n=19)	P-value
SDS	37.3 ± 5.1	49.8 ± 2.5	63.5 ± 3.7	-
%TWL	35.3 ± 9.0	31.3 ± 9.9	$26.4 \pm 4.2^*$	0.034

Table 2. Weight loss outcome according different SAS score.

	Normal (n=44)	Moderate (n=23)	Severe (n=16)	P-value
SAS	34.1 ± 5.2	47.8 ± 3.6	64.1 ± 2.8	-
%TWL	34.2 ± 10.3	32.4 ± 4.7	$25.2 \pm 4.2^{\#}$	0.034

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THE RELEVANCY OF GASTROSCOPY IN THE DIAGNOSTIC WORK-UP FOR MARGINAL ULCERATION FOLLOWING LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS

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Background

A possible cause for abdominal pain after Roux-Y gastric bypass (RYGB) is marginal ulceration (MU) at the gastrojejunostomy. MU is diagnosed with gastroscopy, which poses a burden on patients and health care resources. It is, however, unknown how often gastroscopy yields negative results in this setting. Moreover, many patients may be treated pragmatically with optimization of proton-pump-inhibitors (PPI's), which are commonly prescribed after RYGB.

Objectives

We examined the incidence and treatment of gastroscopy-diagnosed MU after RYGB and identified risk factors for MU. The ultimate aim was to redefine our protocol for diagnosis and treatment of suspected MU after RYGB.

Methods

This was a post hoc analysis of a prospective cohort of 2273 patients undergoing RYGB between 2014-2019 in our bariatric unit. All patients presenting with abdominal pain >30 days postoperatively were included. Primary outcome was MU during gastroscopy (i.e. Forrest classification 2C-3). Risk factors were identified using multivariable regression analyses.

Results

We included 498 patients with abdominal pain after RYGB of whom 136 patients (27%) underwent gastroscopy. MU was observed in 25/136 patients (18%). 20/25 patients (80%) already used PPI's. In 15 of these patients, symptoms resolved with optimization of PPI-treatment (e.g. dosage increase). The remaining 5 patients underwent revisional surgery, at a median of 158 days (range 7 - 346) after MU diagnosis. The remaining 5/25 patients (20%) who did not already use PPI's started treatment and became free of symptoms. All patients were urgently advised to quit smoking. Independent risk factors for MU were male sex (OR 3.73; 95%-CI 1.19-11.73; p=0.024) and smoking (OR 5.96; 95%-CI 2.23-15.93; p<0.000).

Conclusion

One in five patients with abdominal pain after RYGB underwent diagnostic gastroscopy. MU was not often seen (18%). The vast majority of these patients (80%) were successfully treated with PPI-treatment and lifestyle advises. Revisional surgery was only rarely performed. In future clinical practice, we propose a pragmatic strategy of PPI optimization and cessation of smoking, only performing gastroscopy if symptoms persist for several months.

O-324

THE RETURN OF HUNGER AFTER BARIATRIC-METABOLIC SURGERY

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Background

Bariatric-metabolic surgery is a commonly used treatment for severe obesity. It leads to substantial weight loss and improves comorbidities, including diabetes, hypertension, and hyperlipidemia. However, despite the success of the surgery, a small proportion of patients experience weight regain, which may be accompanied by the return of hunger. Understanding the lived experiences of patients who undergo bariatric-metabolic surgery is important for clinicians and patients alike.

Objectives

This study aimed to explore the return of hunger among patients who underwent bariatric-metabolic surgery at a private hospital in Ireland. The study sought to understand the factors contributing to the return of hunger and how patients coped with this experience.

Methods

A qualitative approach was used, and semi-structured interviews were conducted with 20 patients who underwent bariatric-metabolic surgery at the private hospital in Ireland one year prior to the study. The interviews were audio-recorded and transcribed verbatim. Data analysis was conducted using a thematic analysis approach.

Results

The findings of the study revealed that the return of hunger was a common experience among the participants. The participants attributed the return of hunger to factors such as emotional eating, stress, and lack of support. The participants coped with the return of hunger by seeking support from healthcare professionals, family and friends, and by adopting new coping strategies.

Conclusion

The findings of this study highlight the importance of addressing the return of hunger after bariatric-metabolic surgery. Healthcare professionals need to provide ongoing support and education to patients to help them cope with the return of hunger. This study also emphasizes the importance of incorporating psychological support into the post-surgical care of bariatric-metabolic patients. Finally, this study suggests that further research is needed to explore the effectiveness of mindfulness and other coping strategies in managing the return of hunger after bariatric-metabolic surgery.

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THE SWALLOWABLE GASTRIC BALLOON: GLOBAL EXPERIENCE IN 5003 CONSECUTIVE PATIENTS - THE LARGEST GASTRIC BALLOON STUDY IN THE WORLD

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Background

The Allurion Gastric Balloon (AGB) does not require endoscopy or sedation for placement or removal. More than 120,000 patients have been treated in 60 countries over 7 years. The AGB Program includes a unique Virtual Care Suite that provides remote patient monitoring, secure messaging, and telehealth via a Bluetooth scale, health tracker and smartphone app.

Objective

The aim of this study was to evaluate the safety and efficacy of the AGB Program in a large, diverse, global population.

Methods

Data from 5003 consecutive patients receiving the AGB Program was analyzed from 26 centers across 9 countries. In-person nutritional follow-up was performed at least monthly and virtual follow-up was done at least weekly. Data included weight loss, metabolic parameters, ease of placement, device performance and complications.

Results

Baseline mean characteristics were: age 42.5±12.5 years, weight 95±19.2kg, BMI 34.1±5.3kg/m², triglycerides 127.8±66.8mg/dL, LDL cholesterol 127.5±38.3mg/dL, and HbA1c 5.5±1.2%. After 4 months, mean results were: weight loss 13.5±6.1 kg, BMI loss 4.84±2 kg/m², and %TBWL 14±5. All metabolic parameters significantly improved. Patients lost to follow-up: 4.1%. Patients able to swallow the device: 99.95%. Empty balloons were vomited after residence in 1.5% of patients. Adverse events were: intolerance requiring balloon removal (2.1%), early deflations (0.4%), spontaneous hyperinflation (0.2%), gastric dilation (0.09%), small bowel obstruction (0.08%), gastric outlet obstruction (0.06%), esophagitis (0.04%), gastric perforation (laparoscopically repaired) (0.04%), pancreatitis (0.02%), and delayed intestinal balloon transit (0.02%).

Conclusion

The largest study of the Allurion Gastric Balloon Program confirms a TBWL of 14%, significantly improved metabolic parameters, and consistent safety in a diverse, global population. The unique Virtual Care Suite facilitates close follow-up to optimize safety and efficacy.

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THE TOTAL SMALL BOWEL AND THE BILIOPANCREATIC LIMB LENGTH IN OAGB: IN SEARCH OF THE HOLY GRAIL?

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Background

At this moment there is no consensus about the “optimal” length of the Bilio-Pancreatic Limb (BPL) length in One Anastomosis Gastric Bypass (OAGB), although most authors and OAGB surgeons nowadays tend to keep the BPL length as short as 150 cm instead of the previous “standard” of 200 cm. For OAGB according to M. Carbajo the guidelines are well established: ratio common limb length (CL) to total small bowel length (TBL) between 0,4 and 0,43 after measurement of the TBL (World Journal of Surgery pp 1-8 Oct 2019).

Objectives

What are the advantages and disadvantages of the TBL measurement? What is the optimal formula to reach the ultimate goals of bariatric-metabolic surgery: excellent weight loss, without malnutrition, excess weight loss and other side effects: diarrhea, reflux..?

Methods

Literature study: what do we learn from the actual data in the literature concerning measurement of the total bowel length in correlation to the biliopancreatic limb length, its accuracy in laparoscopy and the influence on the final outcomes of OAGB.

Results

The primary results of several recently published studies show favourable, promising outcomes of OAGB when measuring TBL, confirmation is needed by larger randomized control studies.

Conclusion

Shortening of the BPL length to 150 cm in MGB shows no statistical significant difference in weight loss compared to 200 cm but has less nutritional deficiencies. Measurement of the total small bowel length (TBL) seems useful not only in optimizing the weight loss but also avoiding nutritional problems. More studies and randomized trials are needed to confirm these findings. The skills to define the accurate limb lengths to obtain the best outcome should be established.

O-327

THE VALUE OF HAVING A STAKEHOLDER ENGAGEMENT STRATEGY FOR A NATIONAL BARIATRIC-METABOLIC SURGERY REGISTRY IN CHALLENGING TIMES

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Background

Population level data capture is critical for a bariatric-metabolic surgery registry in order to minimise the perception of bias. When contribution to a registry is not mandated, achieving high rates of clinician participation is challenging. Additionally, if a registry is established as cases are burgeoning, it can be difficult to predict future case ascertainment and the potential for procedure numbers to rise significantly over the course of the registry must be considered.

Objective

To demonstrate how an effective stakeholder engagement strategy is essential to high-level case ascertainment for a bariatric-metabolic surgery registry with voluntary participation.

Methods

An engagement strategy was devised by the registry's steering committee and implemented from the establishment of the registry. Ethics and local approvals were obtained for the 137 hospital sites where 247 surgeons were known to do bariatric-metabolic surgery, whilst registry personnel actively encouraged participation with invitation letters, and the promotion of the registry with newsletters, reports, meetings and workshops, and training. Stakeholder engagement shifted with the onset of COVID-19 restrictions from locally presented meetings and training and regular mailouts to engaging virtually, via email, or phone. Participation was monitored from the data submitted by use of a customer relationship management platform. Case ascertainment of the registry as approximated based on a national dataset of the number of surgical procedures. Completeness of outcome data was monitored with the registry's database.

Results

For the 6-month period to 20 March 2023, 193 surgeons at 128 sites contributed data, compared to 161 surgeons at 113 sites in the 6-month period prior to 4 March 2020. The registry enrolled an additional 58,320 participants from March 2020 to March 2023. Estimated case ascertainment was stable over the period (74% in 3/2020 vs 77% in 3/2023) for private operations, as was the overall completeness of perioperative outcome data (91% in 3/2020 vs 87% in 3/2023).

Conclusion

An effective engagement strategy used by this registry contributed to its continued high-level case ascertainment over the period March 2020-March 2023.

O-328

TOUPET VS NISSEN FUNDOPLICATION ASSOCIATED TO SLEEVE GASTRECTOMY: AN INITIAL EXPERIENCE

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Introduction

Sleeve gastrectomy (SG) with fundoplication is an emerging bariatric procedure (BP) in the treatment of patients with severe obesity and gastroesophageal reflux disease (GERD). Although concomitant hiatoplasty has been increasingly been performed to treat Hiatal Hernia (HH) with both SG and Roux-en-Y gastric bypass, a consistent number of patients still complain of GERD during the post-operative follow-up. The procedure consists of a vertical gastrectomy associated with a Nissen (N-SG) or a Toupet (T-SG) fundoplication. However, few studies are present on this BP and there is no comparison between these two different types of fundoplication.

Aims

The aim of this study was to demonstrate the feasibility of T-SG and N-SG and to compare the evolution of upper gastrointestinal (GI) symptoms in obese patients presenting with preoperative esophagitis and/or HH.

Material and methods

33 N-SG and 14 T-SG consecutive patients operated in 2021 with a mean follow-up of 38.3 ± 12.9 weeks were enrolled. The two groups were matched by age, sex, BMI, the severity of esophagitis, HH, and Helicobacter Pylori status. The intensity-frequency of each upper GI symptom was compared using a standardized questionnaire.

Results

The preoperative BMI was 37.4 ± 2.7 in the N-SG and 37.3 ± 7.7 in the T-SG ($p=NS$). After BP there was no significant weight loss between N-SG and T-SG with a mean BMI of 28.5 ± 4.2 in the N-SG ($p<0.001$) and 28.3 ± 3.3 in the T-SG ($p=0.003$). Significant improvement of GERD symptoms such as heartburn ($p<0.001$), regurgitation ($p<0.001$), cough ($p=0.006$), and epigastric burning ($p=0.007$) was shown after both BP. Three patients presented subocclusive symptoms (two after N-SG and one after T-SG) and required the gastric valve disassembling. There were no significant differences at paired T-test between N-SG and T-SG in any upper GI symptoms after surgery.

Conclusions

N-SG and T-SG are feasible and effective procedures for GERD treatment in obese patients with preoperative symptoms. Further studies are mandatory to validate both procedures.

O-329

UNCOVERING THE PATHOGENESIS OF OBESITY COMPLICATED WITH PAPILLARY THYROID CARCINOMA VIA BIOINFORMATICS AND EXPERIMENTAL VALIDATION

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Background

Papillary thyroid cancer (PTC) is the most common pathological type of TC and the common molecular mechanism between it and obesity remains unclear.

Objectives

This study used bioinformatics and in vitro experimental validation to explore the common pathogenesis of obesity and PTC.

Methods

Gene Expression Omnibus (GEO) was used to obtain gene expression datasets for obesity (GSE151839) and PTC (GSE33630). We used Perl program and R software to obtain differentially expressed genes (DEGs) and common genes, perform GO function and KEGG pathway enrichment analysis, construct the protein-protein interaction (PPI) network, identify hub gene, and perform transcription factors (TFs) analysis. After validation in external datasets as well as in vitro experiments, common targets for both diseases were finally identified.

Results

A total of 23 common DEGs were screened between obesity and PTC, of which 17 genes were up-regulated and 6 genes were down-regulated. Go enrichment analysis showed that DEGs were closely associated with the functions of signaling pathways such as ossification, collagen-containing extracellular matrix, and extracellular matrix structural constituent. In contrast, KEGG enrichment analysis showed that DEGs were closely associated with the functions of ECM-receptor interaction, focal adhesion, human papillomavirus infection, PI3K-Akt signaling pathway, and other signaling pathways. The top ten key genes were screened from the PPI network using cytoHubba and MCODE plugin, namely MMP9, COL11A1, TNC, DCSTAMP, CHI3L1, COMP, CXCL8, MNDA, SPP1, CHIT1. Based on the evidence from external datasets, MMP9, MNDA, TNC, and CHIT1 were identified as hub genes for both diseases. Transcriptional Regulatory Relationships Unraveled by Sentence-based Text mining (TRRUST) was used for transcription factors (TFs) enrichment analysis to identify ELF4 and STAT3 as common TFs for both diseases. Finally, in vitro experiments were used to further analyze their clinical significance and biological functions.

Conclusion

In summary, the discovery and exploration of hub genes and corresponding TFs that regulate abnormalities in obesity and PTC can help us better understand the intrinsic relationship between these two diseases and thus inspire new diagnostic ideas.

O-330
UNICENTRIC COMPARATIVE ANALYSIS WITH PROPENSITY SCORE MATCHING: DIRECT SADI-S VERSUS TWO-STEP PROCEDURE

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Background

Single anastomosis duodenoileal bypass with sleeve gastrectomy (SADI-S) was conceived as a simplification of the standard duodenal switch (DS) procedure and has excellent results in weight control and comorbidities resolution. Sleeve gastrectomy was firstly conceived as part of the DS procedure. In patients with severe obesity, sleeve gastrectomy was proposed as a first step to minimize the surgical risks.

Objectives

The aim of this study was to assess the effectiveness and safety of SADI-S, comparing its results as a direct or two-step procedure.

Methods

Unicentric cohort analysis of a prospective maintained database including 299 patients that underwent direct SADI-S versus 40 patients with a two-step procedure. To compare outcomes between the two groups, we performed a propensity score matching. The matching was 3:1, 108 patients in direct SADI-S group versus 36 patients in two-step group.

Results

After matching, patients in two-step SADI-S group were younger (42.6y Vs 51.2y, $p < 0.001$), and with a higher body mass index (BMI 55.7kg/m² Vs 50.1 kg/m², $p < 0.001$) than the direct SADI-S group. One year after surgery %TWL was 37% versus 30% in the direct and two-step groups, respectively ($p < 0.001$). At four years follow-up, %TWL was still better in direct SADI-S group (31% versus 24.8%, respectively). The mean weight loss one year after surgery was 45kg in direct SADI-S group and 30kg in two-step group ($p < 0.001$). Rate of comorbidities resolution was 88.5% for diabetes, 73.0% for hypertension, 77.0% for dyslipidemia and 85.7% for sleep apnea, with no differences between both techniques. There were no differences in intraoperative or postoperative complications rate. Global complication rate was 8.33% in each group. Severe complication rate (Clavien Dindo \geq IIIa) was 6.4% in direct SADI-S and 5.6% in two-step SADI-S. There was no mortality.

Conclusion

In medium term, SADI-S is a safe and effective technique that offers a satisfactory weight loss and remission of comorbidities. Patients submitted to two-step SADI-S had a higher initial BMI and presented a lower %TWL than direct SADI-S.

O-331

USE OF A VACUUM MATTRESS DURING LAPAROSCOPIC SLEEVE GASTRECTOMY REDUCES THE INCIDENCE OF RHABDOMYOLYSIS AND ACUTE RENAL FAILURE – CASE-MATCHED STUDY

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Background

One of the complications of bariatric surgery is rhabdomyolysis (RML). Increased rhabdomyolysis can lead to acute kidney injury (AKI) with acute kidney failure.

Objectives

The aim of this prospective case matched-study was to assess the usefulness of the usage of a vacuum mattress during laparoscopic sleeve gastrectomy (LSG) in reduction of levels of rhabdomyolysis markers (myoglobin, creatine kinase, creatinine) and incidence of RML and AKI in postoperative period.

Methods

The study was conducted between January 2015 and December 2022 in a tertiary referral University Hospital (Krakow, Poland). Patients aged ≥ 18 which were qualified for LSG due to obesity and divided into 2 groups. In first group (Vacuum Mattress group) patients who were laid on vacuum mattresses during the surgery were allocated. The control group consisted of patients for whom a standard operating mattress was used during the surgery. The primary endpoint was the incidence of postoperative AKI or biochemical or clinical diagnosis of RML which required additional treatment. Secondary endpoints were the concentrations of RML markers (myoglobin, creatine kinase, creatinine) on the first postoperative day. Matching was done by three criteria (operative time, BMI and gender)

Results

1105 patients were analyzed. After matching -390 patients were analyzed either in study and control group. We observed reduction in creatine kinase levels (Study 293.1 ± 258.9 ; Control - 435.6 ± 694.6 $p < 0.001$), creatinine (Study - 73.4 ± 16.1 ; Control - 76.5 ± 22.7 ; $p = 0.028$) in 1 POD. We also observed reduction in biochemical and clinical incidence of RML (Study - 2 (0.5 %); Control - 17 (4.4 %); $p = 0.005$) and AKI (Study -1 (0.3 %); Control -7 (1.8%); $p = 0.033$) Univariate logistic regression analyses revealed that, usage of vacuum mattress, male gender, longer operative time and BMI higher then 50 kg/m² were significant risk factors of biochemical RML incidence.

Conclusion

The use of a vacuum mattress during LSG reduced the incidence of both biochemical and clinically symptomatic RML and AKI. The use of a vacuum mattress reduced the level of creatine kinase and creatinine on the 1st postoperative day.

O-332
VITAMIN D DEFICIENCY, SECONDARY HYPERPARATHYROIDISM AND SEVERE OBESITY. NORMALIZATION OF PARATHYROID HORMONE LEVELS BY ADAPTED VITAMIN D THERAPY BEFORE BARIATRIC SURGERY

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Background

Lower bone mineral density, vitamin D deficiency, and secondary hyperparathyroidism after bariatric surgery can lead to an increased risk of fracture. There is no consensus about the optimal treatment of vitamin D deficiency and secondary hyperparathyroidism in patients with obesity before bariatric surgery.

Objective

The aim of this study was to determine the prevalence of secondary hyperparathyroidism in patients with vitamin D deficiency before bariatric surgery and to determine a vitamin D dose that lowers parathyroid hormone levels in secondary hyperparathyroidism. Further, it was the aim to determine predictors for the occurrence of secondary hyperparathyroidism and to investigate whether autonomous hyperparathyroidism was present among patients with severe obesity.

Methods

A retrospective, unicentric data analysis was performed with 153 adults with severe obesity who had presented for endocrine evaluation of obesity prior to bariatric surgery at the *Adipositas-Zentrum Nordwest*. Patients aged 18 years and older with a BMI $\geq 40,00$ kg/m² were included in the study. Treatment of secondary hyperparathyroidism was implemented via daily intake of a vitamin D supplement between 3.000 IU, 6.000 IU, and 20.000 IU vitamin D.

Results

The prevalence of secondary hyperparathyroidism was 34,45 % with a vitamin D deficiency prevalence of 77,78 %. Vitamin D therapy resulted in significantly lower parathyroid hormone concentrations by 32,01 % and significantly increased vitamin D levels by 52,74 %. In 18 of 27 patients, physiological parathyroid hormone levels were achieved through vitamin D therapy. High parathyroid hormone levels were inversely associated with low calcium and vitamin D levels. No autonomic hyperparathyroidism was identified among patients with secondary hyperparathyroidism.

Conclusion

The prevalence of secondary hyperparathyroidism in patients with severe obesity about to undergo bariatric surgery remains high, especially in patients with vitamin D deficiency. Low calcium and vitamin D levels may predict high parathyroid hormone levels. Vitamin D therapy resulted in a decrease in parathyroid hormone levels. Elevated calcium levels, described after high-dose vitamin D therapy and in hyperparathyroidism, were not found during vitamin D therapy. Further studies are required to investigate the treatment effect of specific vitamin D doses on parathyroid hormone levels and to verify the long-term consequences.

O-333

WEIGHT LOSS AFTER BARIATRIC SURGERY IN DIFFERENT AGE GROUPS

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Background

Weight loss after bariatric operations may be reduced in older patients due to changes in metabolism. Some studies showed inferior weight loss in older patients compared to younger ones while others showed no such difference.

Objective

In order to counsel patients about the expected weight loss after bariatric surgery, recommendations stratified by age is important.

Methods

This study encompasses a retrospective analysis of 500 consecutive patients with RYGB or sleeve gastrectomies from a single institution with a mean follow-up time of 3.6 years. Patients were stratified into five groups according to age at the time point of the operation: < 30 years, 30-39 years, 40-49 years, 50-59 years and \geq 60 years.

Results

Weight loss expressed in Percent Excessive Body Mass Index Loss (%EBMIL) at nadir were 86.6, 89.5, 84.0, 77.9 and 76.4% and 75.6, 78.4, 73.3, 68.0 and 69.0% at the time of last follow-up for the five groups, respectively. Weight loss was significantly higher in younger patients than in older patients for both time points. The total number of comorbidities that showed complete remission (normal values without treatment), was also significantly higher in the younger age groups

Conclusions

Primary bariatric operations yield better weight loss results and remission rates of obesity related comorbidities in younger patients, but are still effective in older individuals.

O-334

WEIGHT LOSS FOLLOWING SEMAGLUTIDE USE IN PATIENTS WITH TYPE 2 DIABETES WHO HAVE HAD BARIATRIC SURGERY: A RETROSPECTIVE STUDY

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Background

Semaglutide is a GLP1 receptor agonist (GLP1RA) licensed to treat both type 2 diabetes (T2D) and obesity. Only a few small studies are published on GLP1RA use in patients who have had bariatric surgery (BS). Semaglutide has been available on an insurance funded basis in Abu Dhabi for patients with T2D since 2020.

Objectives

To assess outcome of semaglutide treatment for patients with T2D who had BS in our Centre in Abu Dhabi.

Method

A search was performed of our Centre's clinical database for patients with T2D completing at least 6 months continuous subcutaneous semaglutide treatment between October 2020 and September 2022. Demographic data, medication status, history of BS, laboratory and anthropometric measures were recorded at initiation of semaglutide and at 6, 12 and 18-months' follow-up.

Results

There were 3590 patients fulfilling the search criteria, of whom 325 had history of BS. For the BS group baseline mean age was 48.5±9.8 years; mean BMI 35.6±6.6 kg/m²; mean HbA1c 6.5±1.3%; 74.8% were female; 90% were Emirati, 8% other Arab and 2% non-Arab; 72.3% had sleeve gastrectomy, 24.3% gastric bypass and 3.4% others including revision surgeries. 185 patients had complete data for 6 months, 84 patients for 12 months and 28 patients for 18 months intervals. Median weight loss was 5.3% (IQR 1.9-9.4), 10.0% (IQR 4.4-14.8) and 10.0% (IQR 4.3-14.2%) for each period respectively. Mean semaglutide dose was 0.89, 0.93 and 0.94 mg/week respectively. Weight loss was not associated with type of BS, initial BMI, age, starting HbA1c, insulin use, number of oral hypoglycaemic medications or use of alternative GLP1RA in the preceding 3 months. Semaglutide cessation rate before study end was not significantly different between BS and non-BS groups.

Conclusion

Many patients were excluded due to data gaps caused by increased remote follow-up occurring during the Covid19 pandemic. Nevertheless, this predominantly Emirati cohort is significantly larger than any other postsurgical group treated with GLP1RA described in the literature to date. Despite having T2D and taking a relatively low dose of semaglutide, this degree of real-world weight loss is meaningful, especially at 12 months and compares favourably with outcomes reported elsewhere.

O-335

WEIGHT GAIN 3-5 YEARS POST BARIATRIC METABOLIC SURGERY FROM A MULTIDISCIPLINARY TEAM APPROACH IN AUSTRALIA. CAN AGE AND GENDER SUPPORT DIFFERENCES IN LONG TERM OUT COMES

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Background

Bariatric metabolic surgery is one of the most common procedures today for those who suffer higher weight management issues. LSG is a commonly performed procedure, however weight and the mechanisms of postoperative weight regain can be a significant issue and poorly understood. 1 in 5 patients have regained more than 10-15% of their body weight.

Objectives

With the Multidisciplinary team the objectives will be address lifestyle interventions and to identify whether as a bariatric health professional team we can address factors leading to weight regain post LSG addressing inadequate follow up, maladaptive lifestyle, unrealistic expectations, increased ghrelin levels and different lifestyle interventions. With focus on 30–50-year-old male and female clients over a 5 year period.

Methods

Participation was voluntary. A simple questionnaire was offered to patients that were primary LSG patients who had not re-presented for revision surgery. Questionnaire included experience and expectations pre and post operatively.

Results

537 primary LSG were performed between 2017 and 2022. 74% were female and 26% were male. We received 40 (40/537, 7.4%) responses, Of the 40 patients, 25 (62.5%) were female and 15 (37.5%) were male. Of the females, 15/40 (37.5%) were aged between 30 to 35 and 10/40 (25%) were aged between 40-50. Of the male patients, 10/40 (25%) were aged between 30 to 40 and 5/40 (12.5%) were aged between 40 to 50. Significantly higher weight regains in female at 3 years in both age groups, whereas males appear to have a higher weight at 5 years and this again is evident in both age groups. The return of unhealthy eating habits, substance abuse (ETOH most highly abused), eating disorders, sedentary lifestyle, lost to follow up and embarrassment to return for follow up where most highly scored.

Conclusion

These results show a larger Australian cohort than most in a private hospital setting. This study showed similar issues with both gender although slightly higher weight gain in females to males, it also highlights the need for ongoing follow up by the bariatric team to assist our clientele in reducing difficult experiences associated with weight regain such as hopelessness, shame and frustration.

O-336

WHAT IS THE BEST REVISION SURGERY AFTER SLEEVE GASTRECTOMY? COMPARISON OF THE METABOLIC EFFECTS OF BIPARTITION TRANSIT (BPT) AND SINGLE ANASTOMOSIS DUODENO-ILEAL BYPASS (SADI-S) IN A MINIPIG MODEL

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Introduction

Sleeve gastrectomy (SG) is the most common bariatric procedure despite an important rate of revision surgery, up to 20% at 10 years. New surgical techniques are being evaluated in France, including Sleeve Gastrectomy with Transit Bipartition (BPT) and Single anastomosis duodeno-ileal bypass with sleeve (SADI-S). These techniques would provide significant weight loss and comorbidities improvement by adding malabsorption and incretin secretion, especially for patients who already had a sleeve gastrectomy procedure (SG). However, physiological mechanisms underlying their efficacy remain not fully elucidated and have never been compared in a large mammal model.

Aim

To reproduce a large mammal model of SG, BPT and SADI-S and analyze the mechanisms underlying weight loss and type 2 diabetes improvement.

Methods

Twenty-four adult, female minipigs were randomized into four groups (laparotomy): control, SG, BPT and SADI-S. Postoperative metabolic evaluation was performed during a standardized three hours mixed-meal test by repeated measurement of blood glucose, insulin, D-xylose, and GLP-1.

Results

No animals died prematurely during the study. At 1 month after surgery, only the BPT group showed a significant decrease in postoperative food intake ($p=0.04$), however the mean percentage of weight loss was 3.1%, with no statistically significant difference between the SG, BPT, and SADI-S groups ($p > 0.95$). Fasting and postprandial blood glucose levels did not differ significantly between groups ($p=0.7$ and $p=0.3$ respectively). Fasting GLP-1 secretion was significantly increased in the SADI-S group compared to the other groups ($p<0.05$). After a standardized mixed-meal, there was a similar increase ($p>0.99$) of postprandial GLP-1 in the BPT and SADI-S groups compared to the control and the SG groups ($p<0.01$ and $p<0.01$). There was a significant decrease in D-xylose absorption in the BPT and SADI-S groups compared to the control and the SG group ($p<0.01$ and $p=0.03$ respectively) with no difference between groups.

Conclusion

In a minipig model, we showed that the persistence of nutrient transit through the duodenum combined with intestinal diversion of BPT did not significantly decrease GLP-1 secretion or malabsorption compared to SADI-S. Clinical validation of these results would allow a personalized surgical approach and optimization of the benefit-risk balance after SG.

O-337

WHICH IS THE MOST EFFECTIVE SURGERY AFTER FAILED SLEEVE GASTRECTOMY?

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Background

Three types of revision operations for Sleeve Gastrectomy were performed. Re-sleeve, Revision to One Anastomosis Gastric Bypass and Revision to Banded Gastric Bypass, was performed in 74 patients after the sleeve at our centre. We report in this paper a comparative study of the outcomes.

Method

All patients with a revision sleeve gastrectomy operation were identified from a prospectively maintained database. A comparative analysis of the outcome regarding weight loss and maintenance was done.

Results

74 out of 597 patients were identified who had a sleeve gastrectomy and a revision with three months to two years follow up. The modifications occurred two to six years after the initial operation. Five patients were re-sleeved, 32 were revised to an OAGB/MGB, and 37 were changed to a BGBP. All patients lost weight after the first year of the revision. At two years of follow-up, the re-sleeved patients started regaining weight, the weight loss in the patients with the OAGB/MGB revision plateaued, and the patients with the BGBP revision had lost the most were still losing weight.

Conclusion

There is a trend for weight regain after one year in the re-sleeved patients. The weight loss stabilised after one year in the patients revised to OAGB, and there is a trend of further weight loss even after two years of the revision to BGBP.

Keywords: Revision, Weight-loss, Re-sleeve, OAGB/MGB, BGBP.

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WHY LAPAROSCOPIC SLEEVE GASTRECTOMY CAN GO SO WRONG

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Background

In metabolic-bariatric surgery, laparoscopic sleeve gastrectomy (LSG) is considered to be technically easier compared to gastric bypass with a lesser morbidity. Thus, LSG has become the most commonly performed weight loss procedure worldwide, although thirty percent of the LSG patients need a second procedure. Also, this allegedly simple procedure can lure performing surgeons into a false sense of security as complications are far more dangerous and difficult to handle. It is crucial to consider correct preop indications for LSG and pitfalls in technique to produce effective and safe outcomes.

Objectives

Preoperative evaluation and optimization can provide the correct indication for LSG. That includes detailed history of the patient, gastroscopy including biopsies of the gastroesophageal junction, as well as gastrografin study, esophageal manometry and 24h- pH-metry. This presentation is also about pitfalls in technique, prevention of complications, case presentation of negative courses after LSG including complication management, revisional surgery and how to get the best outcome by following certain rules.

Methods

Literature research (Medline, Pubmed) of indications and complication management for LSG was performed and summarized with our personal experience.

Results

From academic studies it is known that thirty percent of LSG patients will need a second procedure due to either short-term complications like leakage development, or long-term complications, e.g. strictures, reflux or weight regain. Current Guidelines are not accounting for preop diagnostic of esophageal motility so far, furthermore, there is no consensus statement whether LSG has a higher potential for gastro-esophageal junction Barrett's esophagus and adenocarcinoma development. Certain topics, especially preop evaluation with gastrografin study, manometry and 24h-ph-metry do not reach consensus, but may predict outcome after LSG.

Conclusion

There is a need for uniform guidelines regarding exact preoperative evaluation and patient selection for LSG as well as standardization of the technique and management of complications of LSG. It should be performed when preoperative patient evaluation, selection and indication are set correctly, especially in the absence of reflux providing a strong esophageal body motility and resting pressure. Thoughts should be given to technical aspects of the surgical procedure to minimize postoperative complications.

O-339

WOMEN IN MENOPAUSE ARE NOT SO DISADVANTAGED: OUTCOME OF ENDOSCOPIC SLEEVE GASTROPLASTY BASED ON FERTILITY STATUS

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Background

Endoscopic sleeve gastroplasty (ESG) is a safe and effective procedure in class 1 and 2 obese subjects. The effects of menopause on weight are well known. To our knowledge, few data are currently available on this topic regarding bariatric endoscopy.

Material and Methods

A prospective dataset of all ESG procedures performed in a tertiary referral centre was assessed retrospectively. Data on fertility status (menopause and non-menopause women) were collected.

Results

Between May 2017 and October 2021, 209 women underwent ESG. Out of the total, fertility status was available for 204 women: 79 menopause (M; 38,7%) and 125 non-menopause women (NM; 61,3%). At baseline, NM were younger, whereas there were no differences in BMI and weight. Six months after the procedure, NM showed significantly higher TBWL, WL and BAROS score compared to the M group. In contrast, EWL showed no significant difference between the groups. Average TBWL, WL and EWL were not significantly different between the groups at 12 and 24 months (as shown in Table 1). Seven M needed revision procedures (5 Re-ESG, 1 Surgery), whereas ten NM underwent revision (8 Re-ESG, two surgery).

Conclusion

Non-menopausal women who undergo ESG show better outcomes in the short term. However, this advantage does not persist in the medium and long term.

Table 1.

	6 MONTHS			
	WL	EWL	TBWL	BAROS
Menopause (N=73)	15,0 (10,0)	50,8 (24,7)	15,2 (8,6)	3,5 (1,5)
Non-Menopause (N=111)	17,0 (9,0)	54,9 (34,6)	17,2 (8,6)	4,0 (2,0)
P	0,017	0,068	0,0190	0,039
	12 MONTHS			
	WL	EWL	TBWL	BAROS
Menopause (N=69)	13,0 (11,0)	47,8 (31,4)	14,1 (13,0)	3,5 (2,3)
Non-Menopause (N=113)	16,0 (13,5)	52,5 (41,5)	16,3 (13,5)	3,5 (2,8)
P	0,162	0,318	0,2230	0,506
	24 MONTHS			
	WL	EWL	TBWL	BAROS
Menopause (N=40)	13,0 (15,6)	40,5 (39,3)	13,6 (14,8)	2,6 (2,9)
Non-Menopause (N=62)	10,0 (11,8)	35,4 (45,0)	10,4 (13,4)	2,5 (3,4)
p	0,4	0,716	0,5190	0,776

WL= Absolute Weight Loss; EWL=Excess Weight Loss; TBWL= Total Body Weight Loss; BAROS = Bariatric Analysis and Reporting Outcome System questionnaire.

The comparison was performed using the Mann-Whitney U test.

VIDEO ABSTRACTS

V-1

2 INCIDENTAL FINDINGS OF PANCREATIC CYSTIC AND OVARIAN CYST DURING LAPAROSCOPIC SLEEVE GASTRECTOMY

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Background

Pancreatic cysts are a common incidental finding during imaging or surgical procedures. Depending on the cyst type, growth pattern, and symptoms, options for management might include surgical resection or conservative monitoring. Ovarian cysts are a common incidental asymptomatic finding in premenopausal women. Factors such as patient's age, family history, physical exam findings, size and appearance of the cyst can give indication towards malignancy. Surgical drainage is indicated in suspicious or complex ovarian cysts, i.e those exceeding 10 cm in size.

Objective

We present two cases of incidental findings during LGS: a pancreatic cyst during a laparoscopic sleeve gastrectomy in a 24 year old female patient; and a huge ovarian cyst during a laparoscopic sleeve gastrectomy.

Case 1:

Methods

The patient is of a 24 year old female with BMI 37.5 and no past medical or surgical history presented for laparoscopic sleeve gastrectomy. Intraoperatively, after the liberation of the greater curvature, a cystic mass was identified at the pancreatic body

Result

After consulting the opinion of a hepatobiliary specialist and considering the benign nature of the entity, the decision was taken to complete the planned procedure, and conduct a follow up MRI within 6 months.

Case 2:

Methods

The patient is a 24 year old female with BMI 39.6, and a medical history of Iron deficiency anemia, presented for laparoscopic sleeve gastrectomy. Upon insufflation of abdomen and careful inspection, a 35 cm ovarian cyst was noted on right side.

Result

After consultation of OBGYN, we proceeded with drainage of the cyst followed by cystectomy with ovarian preservation, and then after asserting the benign nature of the pathology the preplanned bariatric procedure was completed.

Conclusion

Incidental findings during a bariatric procedure often create challenging situations concerning the continuation of the procedure itself. Proper Intraoperative assessment and a sub specialized opinion of relevance help make a proper decision thereby offering the patient the best care.

V-2
A RISKY REVISIONAL LAPAROSCOPIC GASTRIC POUCH RESIZING

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Introduction

Revisional bariatric surgery is an option for patients who experience inadequate weight loss after primary elective bariatric procedures, furthermore if reflux is associated. However, there is conflicting data on safety outcomes of revisional procedures.

Objective

In this video we present a laparoscopic gastric pouch resizing in a patient with insufficient weight loss and reflux after a LRYGB in 2014 to outline the risks associated to revisional surgery.

Clinical Case

56-year-old woman with LRYGB in June 2014. BMI:40.6, no comorbidities. After it, she achieved just a weight loss of 20 kgrs, from 100 to 80 kgrs. She also began with reflux and weight regain in 2017.

Supplementary Tests

High Endoscopy 08/2021: Hiatal hernia. Post-surgical changes related to gastric bypass without lesions. Gastric ulcer: Forrestt III. Barium 08/2021: stomach with a significant dilatation of the gastric pouch, hiatal hernia and gastroesophageal reflux. A sliding hiatal hernia: herniation of half of the pouch into the thoracic cavity. Gastroesophageal reflux and tertiary contractions in the distal esophagus were demonstrated. Abdomen Ultrasound 11/2021. Liver parenchyma with steatosis. Simple liver cyst of 12 mm in right lobe.

Surgical Intervention

25/10/2022: a high volume hiatal hernia is released, reducing the gastrojejunal(GJ) anastomosis to the abdomen. It had tough adherences to the remanent. Likewise, the jejunal stump was also dilated. We performed a hiatorrhaphy, a resizing of the pouch, a resection of the prior GJ anastomosis and a new one which was reinforced. Tightness was checked with blue methylene.

Postoperative

She began with signs of sepsis by the 2nd postoperative day. We reoperated her finding out a severe peritonitis due an unseen perforation in the remanent but without any problem in the most dangerous place, the new GJ. Spending 15 days in the Critical Unit Care until she overcame the sepsis, she was discharged after one month.

Conclusions

Revisional bariatric surgery is a complex and technically demanding surgery and is generally associated with a considerably higher risk than primary procedures. The complication rates for laparoscopic revision have been reported to be in a range from 0 up to 40 %. Major complications require intervention and entail a life-threatening.

V-3

ACUTE BLEEDING MARGINAL ULCER FISTULIZED TO GASTRIC REMNANT AFTER LAPAROSCOPIC OAGB/MGB

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Background

The complications of One Anastomosis Mini Gastric Bypass/Mini Gastric Bypass (OAGB/MGB) include inadequate weight loss, marginal ulcers, persistent GERD, and malnutrition. Marginal ulcers occur due to factors such as increased acid exposure, long gastric pouch, anastomotic tension, or type of suture. In the setting of bleed or perforation, surgery is needed. Gastro-gastric fistulas are also poorly understood, but their predisposing factors include anastomotic leak, and in our case, fistulization of an already existing marginal ulcer.

Objectives

We present the case of a marginal ulcer fistulized to the gastric remnant as a complication of a OAGB, which required an exploratory laparoscopy.

Methods

The patient is a 22-year-old man who presented with melena, decreased LOC, and anemia (Hgb 5.6) 2 years after a OAGB. Gastroscopy revealed a Forrest 3 ulcer at the anastomosis but no sign of bleed. CT angiography showed no image of GI tract contrast extravasation. After 2 days of conservative resuscitation, and in the light of no adequate justification for the patient's symptoms and declining clinical and hemodynamic status, an urgent gastroscopy was done and showed an active pulsating bleeding from the anastomotic ulcer (Forrest 1). Patient was thus taken to the operating room.

Results

Laparoscopic exploration showed a bleeding marginal ulcer that had fistulized to the gastric remnant. The laparoscopic surgical approach included resection of the fistulized marginal ulcer including the previous anastomotic site and the proximal remnant stomach and reconstruction of the GI tract by a RYGB. Histopathologic analysis showed a benign segment of intestinal and gastric wall, a focal area of an ulcer reaching muscularis propria opening to the remnant stomach with inflammation fibrosis and granulation tissue formation.

Conclusion

After a OAGB, the preserved vagus nerve continues to stimulate gastrin secretion, which activates the parietal cells to secrete gastric juice within the stomach. A deep marginal ulcer will erode into the remnant stomach creating a gastro-gastric fistula. In our case, a cycle formed where the fistula allowed the exacerbation of the ulcer, so the surgical approach was resection of the fistula and the gastric remnant to prevent further acid secretion.

V-4

AFTER THE PANDEMIC IS BEFORE THE NEXT PANDEMIC. WHICH IS THE MOST EFFICIENT TECHNOLOGY FOR INTRAOPERATIVE SURGICAL SMOKE MANAGEMENT DURING LAPAROSCOPIC SURGERY? A COMPARATIVE CLINICAL STUDY

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Background

In recent decades, laparoscopic surgery has become the gold standard in surgery. The equipment required, such as high frequency and ultrasonic energy dissectors, generate surgical smoke through combustion, vaporisation, coagulation and mechanical breakdown of tissues and body fluids. Surgical smoke contains particulate matter, toxic gases, chemicals, debris, bacteria, viruses and malignant cells that are harmful to exposed healthcare workers. Early in the pandemic, some experts advised avoiding laparoscopic surgery to prevent possible transmission of the SARS-CoV2 virus. Although all guidelines recommend the rigorous use of intraoperative smoke evacuation technologies, there is limited comparative data on the effectiveness of different smoke management technologies.

Objective

Laparoscopic gastric sleeve resection is associated with significant surgical smoke. Prospective comparative study to test the most effective method of intraoperative smoke management at a single reference centre for bariatric surgery accredited by the German Society for General and Visceral Surgery (DGAV).

Methods

A total of 3 groups of 5 patients each were studied. Group A: continuous filtration with a passive filter, Group B: electrostatic smoke filtration and Group C: continuous high-flow insufflator with smoke filtration and active suction.

Analysis

Intraoperative, continuous analysis of smoke particle concentration with a condensation particle counter (size range 10 nm to 1 µm), particle size determination with laser size spectrometer and optical particle sizer, time-of-flight spectrometer, and electrical aerosol detector were applied. Monitoring of total consumption and CO₂ flow, capnoperitoneal pressure and intervention time occurred. The quality of the intraoperative view and the effectiveness of surgical smoke management were repetitively assessed by the surgeons (Likert scale).

Conclusions

To our knowledge, this study is the first to examine the various technologies for aerosol elimination in the context of clinical care delivery. The results will be crucial to face the next pandemic with unclear bioaerosol loads and harmful plumb to protect healthcare workers and prevent operations from being postponed.

V-5

ALIMENTARY JEJUNAL LIMB ISCHEMIA DURING LAPROSCOPIC ROUX-EN-Y GASTRIC BYPASS SURGERY

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Background

Laparoscopic RYGB has several complications such as dumping syndrome, anastomotic leak or stricture, hernia, or infection. They can appear in the first few days following surgery or several years after the initial operation. One of the rare but serious gastro-jejunal (GJ) anastomosis complications that can be potentially life-threatening is ischemia of the alimentary limb of GJ during LRYGB

Objective

We present the case of alimentary limb ischemia due to iatrogenic trauma during a laparoscopic RYGB in a 41-year-old male.

Methods

The patient is a 41-year-old man who had a laparoscopic sleeve gastrectomy 2 years prior. He presented with persistent GER symptoms despite optimization of medical therapy. He was scheduled for a Roux-en-Y gastric bypass with a hiatal hernia repair for restoration of intra-abdominal LES length, GE junction functionality, improvement of gastric emptying, and decreasing intragastric pressure to alleviate acid reflux. During the creation of the jejuno-jejunal anastomosis, iatrogenic trauma to the mesenteric vessels feeding the proximal side of the alimentary limb occurred leading to focal bleed, controlled by LigaSure™. When the jejuno-jejunal anastomosis was finalized, ischemic demarcated discoloration of the alimentary limb at the gastro-jejunal anastomosis was observed proximally.

Results

Excision of the ischemic limb was performed and a new gastro-jejunal anastomosis was done. Hemostasis and viability of anastomosis were assured, and leak test was performed successfully.

Conclusion

Inadvertent anastomotic complications, such as ischemic alimentary limb during LRYGB, are a rare but potentially fatal complication. Intraoperative recognition of the complication is crucial to prompt immediate repair and revision of the gastro-jejunal anastomosis and to prevent catastrophic anastomotic failure.

V-6

ALTERNATE DISSECTION AND STAPLING IN PATIENTS WITH LARGER SPLEEN FOR LSG

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Background

The normal size of the spleen can vary considerably from person to person, some patients have been found with larger spleens than others. In patients with larger spleen, the dissection of the left crus can be difficult during laparoscopic sleeve gastrectomy (LSG) due to a close attachment of the spleen to this area or the gastric wall, which may increase the risk of injury of the splenic vessels. In patients with larger spleens, a special method of dissecting and stapling may be necessary.

Method

One patient was admitted to our hospital for bariatric surgery. The patient was diagnosed with metabolic syndrome and underwent laparoscopic sleeve gastrectomy + transit bipartition for treatment.

Results

Female patient, age 25 years, body weight 105.5kg, height 160 cm, BMI 41.99 kg/m², blood pressure (Bp) 133/93 mmHg, hemoglobin A1c (HbA1c) 3.6%. The operative time was 90 min, and intraoperative blood loss was 20 ml. The patient was discharged on postoperative day 2.

Conclusion and indication

An alternate dissection and stapling may benefit patients with larger spleen undergoing sleeve gastrectomy. This method may decrease bleeding and splenic ischemia.

V-7

ANALYSIS OF THE EFFECT IN LEFT-HANDED SILSJiaji Xie - Yong Wang*The Fourth Affiliated Hospital of China Medical University, shenyang, China***Background**

Recently, laparoscopic sleeve gastrectomy (LSG) was widely used in bariatric-metabolic surgery for the security and simplicity. Due to the demand for aesthetics, more patients choose single-incision transumbilical laparoscopic sleeve gastrectomy (SILS), which derived from traditional sleeve gastrectomy, used unique Trocar rather than 5-7. However, because the reduction of Trocars and lack assist, operative problems are encountered in SILS, such as mutual interference of surgical instruments and laparoscope in the only hole site, which prolonged surgical time and increased operation risk. In order to ensure the effect of surgery, surgeons try to take a variety of methods to solve it, but the results are not satisfied.

Objectives

To solve the operational difficulty in SILS, we firstly used left-hand as dominant hand to perform SILS, which could keep operational instruments parallel, performer could operate more flexible from lower right to upper left in patient's abdomen, avoid the intersection of them and we compared difference in operation time and effect between left-handed and traditional method. We'd like to verify this new idea is feasible.

Methods

Clinical data and follow-up information of patients in our center from January 2021 to April 2021 were analyzed. We divided patients for three groups: left-handed SILS group, right-handed SILS group and traditional LSG group, each group comprised 19 patients. All operations were performed by the same surgeon.

Results

The surgical time is significantly shortened in left-handed SILS group (72 ± 18.53 min) than right-handed SILS group (146 ± 49.24 min), similar to LSG group (63 ± 14.26 min) ($P < 0.05$). The vomiting frequency (4.46 ± 1.04 times; 5.47 ± 2.32 times), recovery times of intestinal (4.0 ± 1.41 day; 3.57 ± 0.56 day), and hospital stay time (3.78 ± 0.41 day; 7.84 ± 1.68 day) in the left-handed SILS group is less than right-handed SILS ($P < 0.05$), these results might induced by the shorted surgical time. The pain score (5.89 ± 1.59 ; 6.73 ± 1.32 ; 6.26 ± 1.72), %EWL (percentage of excess weight loss) after surgery 12 months ($93 \pm 0.21\%$; $94 \pm 0.28\%$; $81 \pm 0.17\%$) and lipid metabolism index after surgery are similar in three groups ($P > 0.05$).

Conclusion

By comparing the data of three groups of patients, we could suggest that the left-handed SILS is a feasible technique which could overcome some problems in conventional LSG while achieving comparable clinical outcomes.

V-8

ANTERIOR ABDOMINAL WALL HERNIA SHOULD BE REPAIRED DURING BARIATRIC SURGERY

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Background

Increasing the prevalence of obesity worldwide has led to a steady rise in the number of bariatric surgeries. Consequently, the number of postoperative complications has increased. One of these complications is obstructed incisional hernia which may cause gangrenous bowel.

Objectives

The aim of this study is to review a case undergoing revisional surgery to evaluate the necessity of treating incisional hernia during bariatric surgery.

Methods

Retrospective study of a 61-year-old male presented with a Body Mass Index of 41.9 kg/m² (Obese Class III) post sleeve gastrectomy surgery failed to lose weight.

Results

A 61-years-old male, who underwent a Laparoscopic Gastric Sleeve with Para Umbilical Hernia (PUH) repair many years ago, was presented to the hospital with obesity (regain the weight) and gastric reflux asking for any applicable revisional Bariatric surgery. Generally, the patient did not have any Chronic Disease and was not under any regular medications. Diagnostic investigation was performed and Mini Gastric bypass was selected as revisional procedures. During performing the procedure, a large PUH was observed which is plugged with large amount of Omentum. At that moment of operation, it was decided to not dissect the hernia and to repair the PUH later. Operation was performed safely and patient eventually recovered and discharged. Nevertheless, after two days, the patient was readmitted to the hospital with abdominal pain, vomiting and constipation. X-Ray and Ultrasound of Upper GI showed strangulated hernia. Immediately, the patient underwent diagnostic laparoscopy and PUH repair. Unfortunately, patient aspirated prior to the surgery and kept on ventilator post-surgery, chemical pneumonia, acute kidney injury and DVT are all complication happened and treated within 2 months in the ICU.

Conclusion

This study showed that hernia repair during the surgery is necessary in order to reduce the risk of complications and improve the overall outcome of the procedure.

V-9

ANTROPLICATION TOUPET FOR REFRACTORY REFLUX AFTER RYGB AFTER SLEEVE – TECHNICAL ASPECTS OF AN INNOVATIVE SOLUTION

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Background

Gastroesophageal Reflux (DRGE) after Roux-en-Y gastric bypass (RYGB) for morbid obesity, although potentially controlled by conservative therapy can lead to refractory disease in a small percentage of patients. Radiological and surgical exploration can find a hiatal hernia, or slippage of the pouch inside the thorax, in other cases, a fundoplication with the remnant stomach can be performed, but this would not possible in the case of previous resection from sleeve gastrectomy converted to RYGB.

Objectives

A technical variation of the gastric remnant fundoplication using the remnant antrum was proposed as an alternative technique for patients previously submitted to sleeve gastrectomy and conversion to RYGB.

Methods

Patients with symptomatic reflux disease, documented by endoscopy and /or pHmetry refractory to conservative therapy were treated using the technique. A laparoscopic Antroplication was performed, using the remnant antrum after mobilization.

Results

Technical steps are described in the study, showing drawbacks and solutions for this special situation.. The patient recovered well without complications, and symptomatic has ceased after the procedure. A medication free was obtained 30 days after the procedure, a control endoscopy showed no signs of esophagitis. Operative time was 95min, postoperative stay was 2 days.

Conclusion

Patients suffering from severe gastroesophageal reflux disease after RYGB and previously submitted to sleeve gastrectomy may have this technical solution for intractable acid reflux.

V-10

BIKINI LINE ONE ANASTOMOSIS GASTRIC BYPASS

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Background/Objective

To improve the overall aesthetic appearance after bariatric surgery, we described the Bikini Line Access (BLA) approach 7 years ago. At this point we started performing the Bikini Line Sleeve Gastrectomy and we presented our initial series at IFSO London 2017. We later published our results during the same year at the Obesity Surgery Journal. Later, we explored the BLA in patients with Gall Stones and Hiatal hernia during their primary bariatric surgery. We presented our work at the ASMBS, Obesity Week 2019, and later presented our 3 years outcome at the Egyptian Society of Bariatric Surgery. Two years ago, we started offering our patients the BLA Gastric Bypass and, we aim to describe our technique.

Material and Methods

The patient is a 38-year-old female with BMI 37 (102kg, 1.65m) schedule for Bikini Line One Anastomosis Gastric Bypass. Closed pneumoperitoneum is established using an optical trocar, this is followed by 10 mm trocar placed in the bikini line to the left of the midline followed by two 5mm trocars placed on either side of the bikini line. Dissection of the lesser omentum is commenced to start stapling transversely and then vertically all the way to the Angle of His. We used blue stapler reload for the entire staple line. A gastrostomy is then created and a gastrojejunostomy is created 170 cm from the ligament of Trietz. Closure of the ostomy is completed using a single-layer 3/0 PDS suture. A hypnotic stitch is added between the afferent limb and the gastric pouch, and an anti-twist stitch is placed between efferent limb and remnant stomach antrum.

Results

Operative time was 105 minutes. There were no intraoperative or post-operative complications. Patient length of stay was one night. On two years follow up; patient BMI was 22.8 (62 kg) with % EWL 118%.

Conclusion

BLA in bariatric surgery can have a superior aesthetic outcome in select patients. Bikini Line Gastric Bypass can be technically feasible with favorable aesthetic outcome. However, we still need further studies to assess long term safety and outcome over a larger population.

V-11

BILE REFLUX AND WEIGHT REGAIN POST ONE ANASTOMOSIS GASTRIC BYPASS

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Background

Laparoscopic one anastomosis gastric bypass (OAGB) is a standard bariatric procedure, particularly increasing in the past years, the expected weight loss range 30-40% of body weight, technically this procedure has proven to be simple, safe and effective. Biliary reflux resistant to medical treatment has an incidence of 0,6-10%. We report a patient with bile reflux and insufficient weight loss after OAGB.

Methods

A 45-year-old female transferred from another facility status post laparoscopic OAGB 3 years ago, before surgery her BMI 50, weight 129 kg, height 160 cm, post operatively her weight not reached below 100 kg, at presentation weight 112 kg and BMI 43, for the last two years patient complaining of recurrent attacks of nausea and bilious vomiting. Work up revealed iron deficiency anaemia and protein level at lower limit. Barium study revealed large gastric pouch and tract of gastric fistula. Upper GI endoscopy revealed bile reflux with biliary gastritis and esophagitis.

Technique

Laparoscopic exploration started with meticulous lysis of adhesions and identifying the anatomy, upon dissection of gastric pouch and separation from remanent stomach we identify the exact site of gastro gastric fistula and take it down, followed with measurements of biliopancreatic limb 200 cm and total bowel length 650 cm. Transection of previous gastro jejunal anastomosis. Resizing of gastric pouch and resection of fundus of the remanent stomach. The patient converted to Roux-en-Y gastric bypass with biliopancreatic limb of 175 cm and roux limb 100 cm. Patient discharged in post operative day 2, her diet gradually advanced and symptoms completely resolved. Last seen 5 months post operative doing well with weight of 92 kg BMI 35,9.

Conclusion

Roux-en-Y gastric bypass is the best treatment of bile reflux resistant to medical treatment after OAGB. Gastro gastric fistula is one of the causes of insufficient weight loss post OAGB.

V-12
BUTTERFLY GASTROPLASTY TO LAPAROSCOPIC RYGB DUE TO FAILED WEIGHT LOSS

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Background

Butterfly gastroplasty, is a modification of (VBG) in which a micro funnel shaped pouch is constructed limited to cardia to reduce the risk of long-term staple-line disruption. It is fashioned by firing two staplers; one on the greater curvature and another on the lesser curve near the cardi to create a 100-150 ml pouch. Although the vertical banded gastroplasty (VBG) is effective in achieving weight loss without metabolic side effects during the first few years, late failures cause weight regain in about 20% of the patients or more. The laparoscopic Roux-en-Y gastric bypass (LRYGB) is the procedure of choice to for failed VBG and butterfly gastroplasty as well. Revisional surgery after butterfly gastroplasty is more risky for fear of ischemia because of interrupted blood supply from both medial and lateral sides.

Objective

We present a case of failed weight loss post butterfly gastroplasty done 4 years prior to presentation, she started with a weight of 85 kg and 1.54 m height-BMI 35.8 kg/m². She lost only 10 kg and came for revisional surgery.

Methods

We went for conversion to RYGB. We did RYGB with 140 cm BP limb length and 60 cm for alimentary limb aiming for further weight loss.

Result

The patient was admitted in the hospital for 2 days to monitor her vitals as well as to assess her tolerance of fluids. She was discharged then and follow up after 2 weeks then 2 months were unremarkable.

Conclusion

Conversion of butterfly gastroplasty to RYGB is a feasible procedure and is associated with acceptable early morbidity rates. It provides acceptable weight loss and improvement in obesity-related health problems.

V-13

CHRONIC GASTROGASTROUS FISTULA AFTER SLEEVE GASTRECTOMY

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Background

The sleeve gastrectomy is the most performed bariatric procedure in the world. Gastric leak remains an important complication (2.2%). Sometimes this leak evolves into a gastrocutaneous fistula. A variety of endoscopic and surgical techniques are available. Besides the use of Over-The-Scope-Clips, endoclips, Self-Expandable Metallic Stents, also endoscopic drainage by using a Double-Pigtail Stent can be used.

Objectives

A 39 years-old female presented at our hospital with a gastrocutaneous fistula. Her weight was 54 kg, BMI 20 kg/m². She still had a good oral intake. Eleven months ago, she underwent a sleeve gastrectomy. She had a weight of 93 kg, BMI of 34 kg/m². The second day post-operative she underwent a relaparoscopy for oversewing and draining a proximal leak. Antibiotics were continued. Nevertheless, a gastrocutaneous fistula appeared after a few weeks. The next 8 months the outflow of the fistula increased. Post-prandial evacuation of food occurred. Ten months after surgery she asked a second opinion. An Over-The-Scope-Clip was used to close the internal fistula orifice. Initially the fistula outflow decreased, but after a week it grew again.

Methods

Further investigation showed an iron deficiency anaemia, low inflammatory parameters (leucocytes $5.8 \times 10^9/L$ and CRP 6.5 mg/L) and no other abnormalities. Upper-GI series confirmed the gastrocutaneous fistula in the proximal sleeve and a hourglass-like passage of the contrast. Abdominal CT revealed a small collection. Gastroscopy endorsed this hourglass shaped sleeve with the OTSC-clip at the septum. The clip could easily be removed. Two pigtail stents were placed in the 4 mm opening of the gastrocutaneous fistula. Two days after stent placement the external fistula tract was excised and closed, while continuing the antibiotics for 2 weeks.

Results

Follow-up of 2 months showed a good healing of the wound. She had no fever. There is a good oral intake and stable weight 56 kg, BMI 20.6 kg/m².

Conclusion

A chronic gastrocutaneous fistula can be treated minimal invasive with internal drainage via double pigtail drain. Although controversially, closing the external fistula orifice ensures a higher resistance to the outside, aiming to facilitate the internal drainage with healing of the skin and subcutaneous tissue.

V-14
CHRONIC SLEEVE LEAK CONVERSION TO ESOPHAGOJEJUNOSTOMY

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Background

Staple line leak is a potential complication after sleeve gastrectomy with rates reported as low as 0.15%. Various techniques are available to manage this complication, including endoscopic methods such as pigtailed, stents, and Endovac, as well as surgical procedures such as fistulojejunostomy or esophageojejunostomy (EJ).

Objectives

To describe the management of chronic leak complicated by branched fistulas with partial gastrectomy and EJ.

Methods

We present the case of a 56-year-old man who had previously undergone sleeve gastrectomy and subsequently developed chronic leak with multiple branched fistulas. Workup including upper endoscopy and fluoroscopy showed branched fistula tracts extending to the left upper quadrant, and recanalizing into the sleeved stomach inferiorly. Endoscopic management with pigtailed was performed to bridge the patient for EJ surgery. During surgery, partial gastrectomy was performed and a retrocolic EJ was fashioned. Finally, the jejuno-jejunostomy was created and the Peterson's defect was closed off.

Results

The patient tolerated the procedure well and was discharged on postoperative day (POD) 3. After presenting on POD 7 for drain removal, the patient developed severe abdominal pain. CT scan of the abdomen revealed a small fluid collection suggestive of hematoma around the anastomosis. After conservative management, follow-up CT scans and upper GI were carried out, all of which were negative for leaks. The patient was discharged after 5 days on a pureed diet. No post-operative complications were reported at 3 months of follow-up.

Conclusion

EJ with partial gastrectomy is the definite management for chronic refractory branched sleeve leak.

V-15

CICATRIZED ULCER AT THE GASTRO-JEJUNOSTOMY IN OAGB CASE MANAGED BY CONVERSION TO RYGB

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Background

One Anastomosis Gastric Bypass (OAGB) is gaining popularity over years since introduced by Rutledge in 1997. It has been proposed as a simpler and efficient weight reducing surgery. It offers improvement/cure of many parts of metabolic syndrome, especially diabetes and hypertension. Needless to mention its effects on sleep apnea syndrome, osteoarthritis and many other diseases related to obesity. However, it comes with many risks as well, starting from leakage and bleeding to long term nutritional deficiencies. Biliary reflux is a fearful complication whose incidence is not accurately reported. There are few papers in literature talking about stomal ulcers after OAGB, with some of them talking about perforated ulcer.

Objectives

We present here a case with history of OAGB that was done two years prior to presentation with of weight 117 kg and a height of 175 cm (BMI= 38.2 kg/m²). He came with complicated stomal ulcer ending in fibrosis as diagnosed with upper endoscopy and 3D CT volumetry. This led to obstruction of the gastro-jejunosotomy with severe vomiting and malnutrition. His BMI at presentation was 17 kg/m².

Methods

The patient tried medical treatment, but it failed because of the fibrosis at the level of GJ anastomosis. We went for exploratory laparoscopy aiming at resection of the fibrotic part and going for RYGB. The GJ was adherent to the stomach anteriorly and the remnant stomach posteriorly that we had to do some sort of partial gastrectomy to be able to resect the fibrotic area and be able to create a pouch for RYGB. We did RYGB with 50 cm BP limb length and 50 cm for the alimentary limb aiming at relieving obstruction not for weight loss.

Results

The patient was admitted in the hospital for 5 days to monitor his vitals as well as his tolerance to fluids. He was discharged then and follow-ups after two weeks, 6 weeks then two months were unremarkable.

Conclusion

There are few papers about stomal ulcer after OAGB, and for perforating cicatrized ulcer might not be mentioned in literature to our knowledge.

V-16

COMBINED ENDOSCOPIC AND SURGICAL MANAGEMENT OF AFFERENT LOOP OBSTRUCTION AFTER ONE ANASTOMOSIS GASTRIC BYPASS

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Background

A 63-year-old patient with a history of one anastomosis gastric bypass (OAGB) presented to the emergency department with diffuse abdominal pain. There was no fever, no nausea or vomiting. Lab result showed no abnormalities. CT scan revealed an afferent loop obstruction at the level of the gastroenterostomy. The patient was being treated with omeprazole for an anastomotic ulcer. The OAGB was performed in 2019 for a weight of 129kg (BMI 40). His weight at time of presentation was 82kg (BMI 25.3).

Objectives

The treatment plan included primary endoscopic decompression followed by laparoscopic conversion from OAGB to a Roux-en-Y gastric bypass with excision of the ulcerated gastroenterostomy. The aim was to relieve the patient's abdominal pain and address this very rare long-term complication after one anastomosis gastric bypass.

Methods

During the gastroscopy, a refractory anastomotic ulcer with obstructive stenosis of the afferent loop was found. A balloon dilatation was performed, followed by the placement of a covered metal stent. A few days later, the planned surgery was performed. The stent was removed through a small enterotomy via laparoscopy.

Results

The endoscopic decompression was successful, and the patient was pain-free immediately after the procedure. The patient could be discharged and planned for elective surgery a few days later. The laparoscopic procedure and post-operative course were uncomplicated, and the patient was discharged on the first postoperative day. At three months follow-up, the patient was doing well.

Conclusion

Endoscopic decompression can be a useful approach in the rare case of an afferent loop obstruction after one anastomosis gastric bypass. This approach can provide more working space and possibly reduce the risk of spillage or small bowel injury during manipulation.

V-17

CONVERSION FROM STANDARD GASTRIC BYPASS TO DISTAL BYPASS AFTER FAILED DIABETIC BYPASS PATIENT

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Video Case Report

Roux-en-Y gastric bypass (RYGB) is the most powerful procedure for resolving obese diabetes control. However, the incidence of revision increases to more than 20% with ≥ 10 -year follow-up. For weight regain, gastric pouch dilatation and widening of gastrojejunostomy is the risk factor. Indeed, long biliopancreatic limb length is effective for diabetes control and weight loss. The elongation of the biliopancreatic limb may lead to greater stimulation of the distal intestine, and alterations in bile acid led to better metabolic outcomes. A 38-year-old female had undergone a standard gastric bypass procedure with severe obesity at another hospital in February 2009. At the time of RYGB, her weight was 135 kg with a body mass index (BMI) of 46.8 kg/m². She had co-morbid conditions of diabetes, hypertension, hyperlipidemia, fatty liver disease, and sleep apnea. In the postoperative period, her lowest recorded weight was 89 kg with a BMI of 30.8 kg/m² at 18 months. However, she had weight regain since 24 months, and her weight increased to 128.2 kg with a BMI of 44.3 kg/m² in January 2020. Therefore, we performed a conversion to distal gastric bypass with the reshaping of the gastric pouch and gastrojejunostomy in February 2020. We present one video case with distal gastric bypass conversion and reshaping of the gastric pouch and gastrojejunostomy with failed standard gastric bypass.

V-18
CONVERSION OF LAPAROSCOPIC GASTRIC PPLICATION TO ONE ANASTOMOSIS GASTRIC BYPASS

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Background

Gastric greater curvature plication for weight loss is a restrictive procedure that could be potentially reversible, involves no removal of tissue, and does not have a significant malabsorptive component. Many of these operations will eventually fail to maintain the weight loss achieved in the first 2 years following plication, although early reports are favorable, weight loss following gastric plication remains unclear long term.

Objectives

The purpose of this video is to show the feasibility and safety, as well as the main technical aspects, of a laparoscopic conversion of gastric plication to one anastomosis gastric bypass. Materials and method.

Methods

Conversion bariatric surgeries are technically demanding, and when compared to the primary procedures, they carry a higher risk of complications. This video demonstrates a laparoscopic conversion of gastric plication to one anastomosis gastric bypass (OAGB) with the key procedural steps discussed. Safe conversion of gastric plication to one anastomosis gastric bypass is technically straightforward and can be done safely with favorable results for improved weight loss in the morbidly obese patient.

Case Presentation

A 31-year-old female patient underwent gastric plication for morbid obesity treatment two years ago at another institution. Her initial body mass index (BMI) was 35kg/m². One year after surgery, she started to regain weight, and gastroesophageal reflux disease (GERD) symptoms, her final BMI was 37kg/m². The surgery technique included lysis of adhesions between the stomach and the greater omentum, take down of the plication, partial gastrectomy of the devascularized fundus and body and conversion to OAGB.

Results

The procedure was uneventful, and the patient was discharged on postoperative day 3.

Conclusion

The one anastomosis gastric bypass is the safety and the reliable surgery desired to convert the failed laparoscopic gastric plication.

V-19

CONVERSION OF MAGENSTRASSE AND MILL GASTROPLASTY TO SINGLE ANASTOMOSIS DUODENOILEOSTOMY (SADI) FOR SEVERE OBESITY AND DIABETES

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Background

A 40-year-old male with history of laparoscopic Magenstrasse and Mill gastroplasty (M&M) in August 2010 sought conversion surgery due to severe obesity, BMI of 71.6 kg/m², type II diabetes mellitus (hemoglobin A1c 14%) and obstructive sleep apnea. His weight before the M&M gastroplasty was 558 lbs. He had lost 118 lbs. after surgery but he had regained all lost weight.

Objective

We describe the work-up and laparoscopic conversion of Magenstrasse and Mill gastroplasty to Single Anastomosis Duodenoileostomy (SADI)

Methods

The gastric anatomy was confirmed by EGD and upper GI study. The patient underwent pre-operative medical optimization including intense diabetes management with insulin, metformin and Semaglutide for blood glucose optimization, C-PAP use for OSA, mental health evaluation, and nutrition counseling with emphasis on the malabsorptive nature of SADI and importance of adequate protein intake with daily multivitamin and calcium supplementation. His weight before conversion of M&M gastroplasty to SADI was 506 lbs. He underwent laparoscopic conversion to SADI with common channel 300 cm (total bowel length 630 cm). The post-operative course was uneventful, and he was discharged on post-operative day #2 on a liquid diet.

Results

Patient had lost 146 lbs. and 21 BMI points at 14 months after surgery. The percentage total weight loss was 29% and percentage excess weight loss was 44.7%. He had experienced improvement in OSA and remission of T2DM with hemoglobin A1c 5.4% without any medication. He has intermittent diarrhea and latest labs showed borderline Vitamin D level (26 ng/mL) and anemia (hemoglobin 10.2 g/dL)

Conclusion

Magenstrasse and Mill (M&M) operation is a rarely performed simple gastroplasty with less-than-optimal weight loss results. Laparoscopic conversion of M&M procedure to laparoscopic Single Anastomosis Duodenoileostomy (SADI) is a safe and reasonable operation resulting in robust weight loss and comorbidity resolution. However, long-term follow-up is important to prevent possible macro- and micro-nutrient deficiencies.

V-20
CONVERSION OF OAGB TO LONG LIMB RYGB DUE TO WEIGHT REGAIN AND BILE REFLUX

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Background

OAGB become one of the most popular bariatric surgery because of its technical simplicity and its efficacy on both weight loss and resolution of comorbidities. Bile reflux and weight regain are some complications after OAGB.

Objectives

In this case report we want to share our experiences in management of weight regain and bile reflux after OAGB. We explained our technique in Conversion of OAGB to Long limb Roux en Y Gastric bypass in patient with weight regain and bile reflux.

Methods

A 52-year-old woman (BMI:40) who underwent OAGB 6 year ago with BMI of 48. Her nadir BMI after OAGB was 36, however she has been complained of bile reflux and also inadequate weight loss as well as weight regain. Upper endoscopy reported mild hiatal hernia and erythematous gastritis. Manometry was normal.

Results

After releasing the adhesions, afferent and efferent limbs length were measured. Afferent limb length was:220cm from Treitz ligament and efferent limb length was 680cm from Ileocecal valve. New common channel measured 250cm from ileocecal valve. Afferent and efferent limbs were divided using a linear stapler 2 cm away from old gastrojejunal anastomosis. Gastric pouch resized to 6 cm. Gastroileal anastomosis created 320 cm from ileocecal valve. Ileoileal anastomosis created at 250cm from ileocecal valve. Finally Biliopancreatic limb was horizontally divided using a linear stapler close to gastroileal anastomosis.

Conclusion

Patient discharged with good condition after tolerated liquid diet two days after operation. Four weeks after operation her BMI was 37/9 and she didn't complain of bile reflux. Conversion to Long limb RYGB is technically safe and feasible option particularly in patients who complain of bile reflux and weight regain.

V-21

CONVERSION OF OAGB TO ROUX EN Y GASTRIC BYPASS DUE TO GASTROJEJUNAL ANASTOMOSIS LEAKAGE

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Background

One Anastomosis Gastric Bypass become one of the most popular bariatric surgery because of its technical simplicity and its efficacy on both weight loss and resolution of comorbidities. One of the Severe and lethal complication of OAGB is leakage. Literatures report between 0.1 to 1.5% leakages after OAGB. Management of leakage is still challenging.

Objectives

In this case series we want to share our high volume center experiences in management of leakage after OAGB. We explained our technique in conversion of OAGB to RYGB with jejunostomy tube insertion in patients with anastomosis leak.

Methods

4 patients with different presentations of leakage following OAGB in various post operation days referred to our center. After initial evaluation crystalloid resuscitation and antibiotics administration underwent Conversion of OAGB to RYGB and jejunostomy tube insertion and drains insertion.

Results

First intraperitoneal cavity washed with plenty of water and all collection suctioned. Then Leakage site at gastrojejunal anastomotic gap repaired with absorbable separate 2-0 suture and omental flap inserted on defect. jejunojejunal anastomosis was fashioned in a side to side manner using a linear stapler 70 cm distal to the gastrojejunal anastomosis. The afferent limb was horizontally divided using a linear stapler close to gastrojejunal anastomosis with having longer length of biliopancreatic limb proximal to jejunostenostomy. A tube Jejunostomy inserted in this part of small bowel from left sub costal 5mm port site and guided to common channel and fixed to abdominal wall. Finally three drains inserted intraabdominal space (pelvic cavity, sub hepatic and left side of anastomosis).

Conclusion

All of our patients discharged and managed successfully with this technique. Gastrojejunal Anastomosis Leakage can lead to peritonitis or intraabdominal collection after OAGB conversion to RYGB and Tube Jejunostomy insertion is technically safe and feasible option particularly in hemodynamically unstable patients or with peritoneal sign on abdominal exam. However studies with higher sample size should be done to confirm the effectiveness of this method.

V-22

CONVERSION OF SLEEVE GASTRECTOMY TO MICRO POUCH ROUX-EN-Y GASTRIC BYPASS WITH POSTERIOR CRURAL REPAIR DUE TO SEVERE GERD

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Background

Sleeve gastrectomy is an effective primary alone surgical procedure for the treatment of severe obesity. Despite pre-operative evaluation by gastroscopy and manometric studies, some patients present with de-novo GERD after sleeve gastrectomy. Although some cases can be controlled with the long-term use of proton pump inhibitor medications some patients cannot be treated with conventional methods. Roux-en-y Gastric bypass (RNYGBP) is still the optimal treatment strategy for intractable GERD after sleeve surgery.

Case presentation

59 years old female underwent sleeve gastrectomy 6 years ago due to severe obesity. Her BMI dropped from 41kg/m² to 27 kg/m² over the last 6 years with no weight regain. She has severe symptoms of GERD with recurrent episodes of regurgitation. Upper GI series and gastroscopic evaluation revealed migration of stomach to the thorax with grade-3 hiatal hernia also delay in gastric emptying. A conversion to micro pouch Roux-en-y gastric bypass was done with the posterior crural repair.

Conclusion

The patient was discharged uneventfully on POD 3 on a liquid diet. Her post-operative 1st-month follow-up was unremarkable. She has lost 10kg and her BMI is 25.4 currently. She has stopped using PPI medications and no symptoms of GERD. Roux-en-y gastric bypass is currently the best and most durable option for treating severe GERD after sleeve gastrectomy.

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V-23

CONVERSION TO NISSEN SLEEVE IN A SINGLE STAGE FOR BARRETT AND NON-RESPONDER WEIGHT LOSS AFTER GASTRIC BAND

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Clinical presentation

A 65-year-old female patient was referred to our department because of secondary non-responder weight loss and major reflux with Barrett's esophagus. In 2002, the patient had a gastric band for a BMI of 30.2 kg/m². The patient has a successful weight loss from 80 kg to 55 kg. In December 2022, the patient insisted on the reversal of the gastric band due to psychological problems from weight regain (79.300 kg), reflux esophagitis, dyspnea with effort, and back pain.

Preoperative Tests

Upper GI endoscopy showed band slippage with distal esophageal dilatation and tertiary contractions. Upper GI series showed Barrett esophagus, no active esophagitis, no circular Barrett, and spur up to 38 cm.

Operative procedure

We performed a laparoscopic Nissen Sleeve, cruroplasty, and removal of the gastric band in one session. There was an uncomplicated perioperative course.

Postoperative outcome

There were no post-operative complications. The discharge was on a postoperative day one. At 6 weeks postoperatively, her weight dropped to 68 kg, the heartburn completely resolved, no dysphagia complaints, the food went smoothly, and stopped PPI drugs. She performed daily sports.

V-24

CONVERSION TO VERTICAL BANDED GASTROPLASTY TO LAPAROSCOPIC GASTRIC BYPASS

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Background

Vertical banded gastroplasty (VBG) was one of the first restrictive techniques described in literature. However, it is currently in disuse due to the high percentage of complications reported in both short and long term, thus leading to the need for carrying out a second revisional bariatric surgery. Among the most frequent complications, we highlight the appearance of gastroesophageal reflux disease (GERD), hiatal hernia, gastric pouch dilation with weight regains or, as in our case, oral intolerance with repeated vomiting with high risk of malnutrition. One of the conversion surgeries to be considered after a VBG failure is gastric bypass.

Objective

Reviewing of surgical conversion of VBG to gastric bypass.

Methods

A 63-year-old woman, with a surgical history of uncalibrated VBG performed at an external center in 2005 and subsequent tummy tuck, is referred to our unit due to oral intolerance and postprandial vomiting. Her preoperative BMI was 25 kg/m². We performed a preoperative imaging study with a computed tomography (CT) of the abdomen, gastroscopy and esophago-gastric transit which showed hiatal hernia and gastric ring stenosis. Nutrition was optimized prior to bariatric surgery. The anastomoses were checked and absence of leak was confirmed. Mesenteric and Petersen's defect were closed. The patient was discharged on the 4th day with good oral tolerance and no evidence of complications.

Results

Laparoscopic conversion of VBG to gastric bypass is a feasible technique and should be considered in patients who require revision surgery due to VBG failure, both in cases of weight regain and, as in the presented case, malnutrition due to oral intolerance.

Conclusions

We can conclude that laparoscopic gastric bypass is a valid technique in revisional surgery of VBG. It entails a notable improvement of the patient's quality of life as well as compliance with the bariatric and metabolic surgery goals.

V-25

CREATING AN OMENTAL WINDOW FOR GASTROINTESTINAL ANASTOMOSIS IN PATIENTS WITH SEVERE ABDOMINAL ADHESION

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Background

Abdominal adhesion is a common complication after any abdominal operation that may lead to intestinal obstruction. This complication may cause difficulty for bariatric surgeons to create gastrointestinal (GI) anastomosis. Some surgeons prefer to fully dissect the adhesion before performing the GI anastomosis which may lead to even more abdominal adhesion. From our experience, the creation of an omental window may be beneficial.

Method

One patient who had undergone an abdominal operation previously was admitted to our hospital for bariatric surgery. The patient was diagnosed with metabolic syndrome and underwent laparoscopic sleeve gastrectomy + transit bipartition for treatment.

Results

Female patient, age 53 years, body weight 105.2kg, height 162 cm, BMI 40.1kg/m², blood pressure (Bp) 150/93mmHg, hemoglobin A1c (HbA1c) 10.3%. The operation time was 90 min, and intraoperative blood loss was approximately 20 ml. There was no intraoperative and early postoperative complication. The patient was discharged on postoperative day 2.

Conclusion and indication

Comparing to fully dissecting severe abdominal adhesion for gastrointestinal anastomosis in bariatric patients, the creation of an omental window may be an easy way. The method saves time and decreases intestinal damage.

V-26
CROSSING THE RUBICON: THE USE OF RYGB TO MANAGE RECURRENT HERNIA POST TOUPET FUNDOPLICATION

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Background

Roux-en-y gastric bypass (RYGB) is well established as an alternative to conventional fundoplication procedures to manage gastro-oesophageal reflux disease (GORD) in obese patients. Specifically, partial wraps have a higher long-term failure and recurrence rate. RYGB is invaluable in these instances to address herniation of fundoplication, reflux symptoms and weight-loss.

Objectives

Illustrate applicability of RYGB in managing case of recurrent GORD and hiatus hernia following partial fundoplication

Methods

We present a 62-year-old lady who underwent a laparoscopic Toupet fundoplication in 2011. She presented with GORD-like symptoms, globus and weight regain. BMI was 39.5. Barium swallow, OGD and CT imaging confirmed Barrett's oesophagus and 6cm sliding hiatus hernia with intra-thoracic wrap migration into the mediastinum. We performed a laparoscopic revision of slipped fundoplication, hiatal hernia repair and conversion to RYGB.

Results

After freeing the liver off the right crux and stomach, we began our dissection from the right crux towards the phreno-esophageal angle and left crux. After ligation of short gastric arteries and circumferential dissection of the wrap, we fully mobilised the gastric fundus to return the esophagus and stomach to their normal anatomical positions. After complete anterior and posterior hiatal dissections, a retro-esophageal tunnel was formed. We brought the fundus down behind the esophagus and re-approximated the hiatus using 0-Ticron sutures, leaving the partial fundoplication in-situ. We pexied the fundoplication to the left and right crux. On-table OGD confirmed in-situ fundoplication without leaks or bleeding. Following this, we performed a RYGB. We made a window in the lesser omentum along the lesser curve till 5cm inferior to the GOJ and then formed the gastric pouch. After exposing the DJ flexure, we took a loop of small bowel up to the gastric pouch and divided it. We then constructed a tension-free side-to-side gastrojejunostomy. We then measured 120cm of the Roux limb and formed a side-to-side jejuno-jejunostomy by stapling the biliopancreatic limb to the 120-cm mark on the Roux limb.

Conclusions

The recurrence of GORD following fundoplication, with associated large herniation, presents a challenging surgical revision. We demonstrate that RYGB is an excellent strategy to revise the fundoplication and treat associated symptoms.

V-27

DOES RE-SLEEVE GASTRECTOMY ALLOW US TO GET GOOD RESULTS?Taryel Omarov*Azerbaijan Medical University, Taryel Omarov, Baku, Azerbaijan***Background**

Weight regain following laparoscopic sleeve gastrectomy (LSG) may be due to dilation of the gastric reservoir. Laparoscopic re-sleeve gastrectomy (LrSG) is among the revisional surgery options.

Objectives

We aimed to investigate the effectiveness of LrSG for weight loss after a 36- and 73-month follow-up period.

Method

From June 2016 to January 2023, a total of 48 LSG patients with weight regain, underwent LrSG. We prospectively followed outcomes data were BMI changes, excessive weight loss, changes in laboratory values, change in quality of life and the presence of complications.

Results

The mean age at revision surgery was 48 ± 7.09 (range, 36–73) months, and the mean body mass index (BMI) before LrSG was 41.2 ± 5.2 kg/m². The mean time between the primary and revision surgery was 60 ± 5.2 months. The main reasons for the revisions were weight regain and inadequate weight loss. The mean BMI value decrease at the 12th and 24th months were 26.2 ± 2 and 23.7 ± 1.02 , which were statistically significant ($p < 0.05$). Analyses of hemoglobin A1C (A1C) values showed that the differences at the baseline, 12th and 24th months were statistically significant (95% 1.96 to 3.39, $p < 0.001$ and 95% CI 0.34 to 2.08, $p = 0.005$, respectively). Most importantly, the quality of life improved in all 48 patients at long-term follow-up. No recurrence of obesity was observed.

Conclusions

In patients with weight regain or inadequate weight loss after LSG, LrSG may be a feasible and safe revisional procedure in a selected group of patients. Re-sleeve gastrectomy is an easier, more physiological and more anatomical operation, which allows us to switch to bypass operations in the long run if the patient becomes obese. Larger studies that compare other revisional surgery options (LRYGB, OAGB, duodenal switch, single anastomosis duodeno-ileal bypass) with LrSG are required.

V-28
EARLY BOWEL OBSTRUCTION POST RY GASTRIC BYPASS

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Introduction

There is no consensus of management of ventral hernia associated with severe obesity.

Methods

We present a patient with severe obesity and incisional hernia post sigmoidectomy.

Results

A 54-year-old male patient with body mass index of 45 kg/m² under RY gastric bypass after extensive adhesiolysis in presence of Swiss cheese defects of incisional hernia. The hernia defects were left open for second stage repair after weight reduction. On second day post operatively, the patient developed vomiting. Ct abdomen revealed obstruction of the alimentary limb at one defect. Pt was reoperated where all defects were closed, and biosynthetic mesh was applied. The patient was discharged on fifth on postoperative day. After 12 months, there was no hernia recurrence and BMI dropped to 34.9 kg/ m².

Conclusion

Management of severe obesity associated with ventral hernia is still a challenge that requires an individualized approach.

V-29

ENDOSCOPIC MANAGEMENT OF COMPLICATIONS: INTRACAVITARY PIGTAIL PLACEMENT FOR GASTRIC POUCH LEAKS

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Background/Introduction

Postoperative leaks increase overall morbidity to 61% and mortality to 15%. The average time for symptoms of a leak to present is approximately 3 days after surgery. Leaks are hypothesized to be due to technical factors including anastomotic tension, tissue ischemia, size of staple line, tissue thickness, and blood supply.

Objective

To demonstrate the effectiveness of endoscopic stenting for management of a postoperative gastric pouch leak.

Methods

Case presentation and demonstration of endoscopic technique of intracavitary pigtail placement for a leak from the gastric pouch.

Results

43 years old, Male. Presented with a leak from the upper end of the gastric pouch, just below the gastroesophageal junction. Patient presented to us with dyspnea, fever, and abdominal pain, with a central line, and drain in the left hypochondrium. He was NBM and on IV Meropenem. Patient underwent a banded sleeve gastrectomy in 2013 – weight reduced to 88 Kg in 6 months. He underwent a conversion to a Roux-en-Y gastric bypass along with appendectomy in November 2022. He developed a leak from the stomach pouch in the immediate postoperative period. CT abdomen and pelvis with contrast showed - no evidence of contrast leak, left minimal pleural effusion, minimal perihepatic free fluid. Diagnostic upper GI endoscopy revealed a 0.5 cm fistulous opening just below the gastroesophageal junction leading to an abscess cavity. Therapeutic upper GI endoscopy with intra cavitory pigtail placement - Just below the gastroesophageal junction there was pus seen oozing from a fistulous opening. On careful examination it was seen leading to a cavity because of previous suture dehiscence. The cavity was cannulated under X-Ray guidance. A guide wire was placed, and the opening of cavity was dilated using a 15 mm CRE balloon. The scope was then introduced into the cavity and lavage was given. Guidewire was placed again and then two 7 Fr double J pigtail stents were placed with one loop in the cavity and one loop in gastric pouch.

Conclusion

A leak should be suspected and investigated in any patient with persistent tachycardia, dyspnea, fever, and abdominal pain. Leaks can be managed well endoscopically using stents.

V-30

ENDOSCOPIC REVISION OF ROUX-EN-Y GASTRIC BYPASS FOR WEIGHT REGAIN

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Background

Roux-en-Y Gastric Bypass (RYGB) is a widely recognized and established gold standard surgical procedure for weight loss and management of obesity. However, in some cases, patients may experience complications or inadequate weight loss after RYGB surgery. In such cases, endoscopic revision may be considered as a less invasive alternative to a repeat surgical procedure. As it associated with less complication. Endoscopic suturing: In this procedure, sutures are placed in the stomach pouch to reduce its size and restrict food intake.

Objective

In this video we demonstrate how to revised to RYGB to Endoscopically.

Method

43-year, female underwent RYGB, Initial weight was 111kg, nadir weight was 69 kg and weight regain then weight regain of 11kgs (80 kg) at 48 months after the initial procedure. Revision surgery to ESG was done and at two months follow up patient had lost 11kgs.

Conclusion

Endoscopic sleeve gastropasty is good option after Roux-en-Y Gastric Bypass for management of complications. Endoscopic revision of RYGB is generally considered to be safe and effective.

Keywords: Roux-en-Y Gastric Bypass, Endoscopic sleeve gastropasty, Revision.

V-31

ENDOSCOPY INDUCE LEAK

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Background

Anastomotic injury during endoscopy in Roux-en-Y gastric bypass (RYGB) is a potential complication that can occur when an endoscopy is performed done on post bariatric patients.

Objective

The purpose of this abstract is to explain potential complication of leak during diagnostic endoscopy in post bariatric patients and how to tackle it

Method

A patient with post RYGB presented with chronic dull aching abdominal pain so diagnostic laparoscopy was performed to r/o internal hernia.no internal hernia was found so concomitant on table endoscopy was performed to check for oesophagitis and marginal ulcer and we have noticed leak from anastomosis while performing endoscopy and it was tackled laparoscopically.

Results

We have successfully closed the leak and patient was discharged with no postoperative complications

Conclusion

One should be careful while performing endoscopy on post bariatric penitents as it might lead to leaks.

Keywords: Roux-en-Y gastric bypass, Endoscopy.

V-32

ENDOSCOPY-ASSISTED LAPAROSCOPIC REVISIONAL ROUX-EN-Y GASTRIC BYPASS AFTER POSE IN A PATIENT AFFECTED BY SEVERE OBESITY

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Background

Primary Obesity Surgery Endoluminal (POSE) procedure represents a minimally invasive endoscopic technique belonging to the world of metabolic procedures. Nevertheless, as any of the latter, it may not be able to guarantee long-term results, thereby requiring a revisional surgery.

Objectives

To evaluate the feasibility and safety of an endoscopy-assisted laparoscopic revisional Roux-en-Y gastric bypass in a patient affected by severe obesity, who had previously undergone a POSE procedure.

Methods

We report the case of a patient affected by severe obesity who had already undergone a POSE procedure. Due to the weight regain following the latter, our multidisciplinary team provided the indication for a laparoscopic revisional Roux-en-Y gastric bypass.

Results

The surgery was carried out together with the help of an intraoperative endoscopy, in order to ensure that the gastric plications were not included in the gastric pouch. The postoperative course was uneventful.

Conclusion

The use of endoscopy during the surgical procedure ensures a significant support and further degree of certainty in the creation of the gastric pouch, despite needing an adequate inter-disciplinary collaboration. A revisional Roux-en-Y gastric bypass after POSE is safe and feasible.

V-33

ESOPHAGOGASTRIC FISTULO-JEJUNOSTOMY FOR CHRONIC SLEEVE LEAK

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Background

A 33yr old female patient referred from another hospital for further management of the leak following redo sleeve gastrectomy.

Objectives

Rare surgical management option for a chronic sleeve leak.

Methods

Oesophago fistula-jejunostomy surgery done.

Results

Patient recovered and doing well on follow up.

Conclusion

Rare complications will require out of the box management and unique salvage procedures.

V-34
EXPLORATORY LAPAROSCOPY AFTER SLEEVE GASTRECTOMY CONVERSION TO A ROUX-EN-Y GASTRIC BYPASS

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Background

Revisional surgery of sleeve gastrectomy (SG) to Roux-en-Y gastric bypass (RYGB) is more frequently over the last two decades. Postoperative complications in revisional surgery are slightly higher and gastrojejunal anastomosis (GJA) leak has been described up to 4-6%.

Objectives

The aim of this video was to highlight the importance exploratory laparoscopy as an extra resource for diagnose and treatment.

Methods

This is a case of a 29 years-old woman who underwent a SG in 2020. In 2021, she complained of gastroesophageal reflux symptoms. The upper gastrointestinal (UGI) endoscopy and the UGI series showed a medium hiatal hernia and grade A esophagitis. She was referred to our hospital and SG conversion to RYGB was scheduled. The postoperative period went uneventful and she was discharged at the 2nd day. She returned to the Emergency department (ED) with abdominal pain, fever and tachycardia. Blood test results demonstrated 24590/UL leukocytes and 11.2 mg/dL CRP. The abdominal CT dismissed GJA leaks. However, given the alarm signs, our team decided to perform an exploratory laparoscopy.

Results

Firstly, the entire abdominal cavity was examined, identifying a generalized purulent peritonitis. Intra-abdominal lavages and pus aspiration were performed. At the level of the GJA, a millimeter leak was observed. The anastomosis was resutured. She was treated with antibiotics and discharged after 7 days. Subsequently, she revisited the ED on two occasions due to abdominal pain with normal laboratory tests and abdominal CT. Post-reoperation gastroscopy also did not identify any defects in the GJA. Even so, it was decided to perform a second scheduled exploratory laparoscopy. On this occasion, multiple loose adhesions were identified in the area of the jejunojejunal anastomosis and adhesiolysis was performed. In the postoperative period, the patient reported pain resolution and was discharged on the 2nd postoperative day.

Conclusions

Exploratory laparoscopy could be another resource, not only for treatment, but also for diagnose. In the presence of unexplained abdominal pain and without alarm signs, exploratory laparoscopy could solve pain related to adhesions.

V-35

FAILED REPAIR OF GASTRIC VOLVULUS FOLLOWING SLEEVE GASTRECTOMY

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Background

A 32-year-old male with a history of gastric sleeve, hiatal hernia with mesh and cholecystectomy presented to the emergency department with intermittent nausea and vomiting and inability to tolerate a diet. Esophagoduodenoscopy (EGD) and upper GI imaging suggested volvulus of the gastric sleeve.

Objectives

To demonstrate the failed surgical treatment of gastric volvulus following sleeve gastrectomy with partial gastrectomy, gastropexy and lysis of adhesions, ultimately requiring subsequent gastrectomy with Roux-en-Y reconstruction.

Methods

The patient was taken to the operating room for robot-assisted laparoscopic surgery. The patient was found to have a massively dilated antrum causing obstruction by volvulus at the incisura, as well as numerous adhesions from the hiatus to the incisura from previous surgery. Adhesions were taken down carefully. A 36F bougie was passed into the stomach and a portion of antrum was resected using multiple firings of the 60mm green robotic stapler. A gastropexy was performed from the greater curvature of the stomach to the gastrocolic omentum using 3-0 PDS barbed suture. Intraoperative endoscopy was performed demonstrating a patent sleeve without stricture or angulation.

Results

Postoperatively, the patient experienced initial resolution of symptoms, but presented two months later with recurrent nausea/vomiting and inability to tolerate a diet. EGD and upper GI studies demonstrated recurrent gastric volvulus. Robotic revision was performed with resection of the obstructed stomach and Roux-en-Y reconstruction. The patient recovered well from this surgery without complication.

Conclusion

Gastric volvulus is a rare complication following sleeve gastrectomy, related to the lack of lateral attachments to the stomach following this procedure. Partial gastrectomy with Roux-en-Y reconstruction is the most definitive treatment option for patients with this complication, and should be considered early to decrease the risk of recurrent volvulus.

V-36
FALSE ROUX-EN-Y GASTRIC BY-PASS (RYGBP): ROBOTIC CONVERSION OF A TWISTED ONE ANASTOMOSIS GASTRIC BY-PASS (OAGB)

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Case observation

A 41 Y Old Lady, regain weight after bariatric surgery. Maximum weight 140Kg, min 76Kg, regain weight: 140Kg. Height: 166cm BMI: max 50.8.

History

Hypothyroidism, C-section (Pfannensietl). Surgical history: Gastric By-pass in 2005. No operative record. Gastroscopy: aspect compatible with RYGBP. Gastrographine Esophageal opacification: RYGBP aspect. After adequate a 10 months' preparation without significant improvement in weight loss and after collegial assessment, the patient was taken to surgery.

Surgery

Twisted OAGB, with plication of the efferent intestinal limb. Dilated gastric pouch. Reestablishment of the intestinal track by simple resection of the gastro-jejunal anastomosis. Gastric pouch reduction (36 French bougie). RYGBP procedure.

Follow up

Discharge on J1. Readmission at J2 for vomiting. CT Scan: mild dilatation of the distal biliary limb, medical observation, oral intake tolerated, second discharge on J5. At one month: 132 Kg.

Discussion

Bariatric surgery is a major procedure. Patient information, preparation and follow-up is crucial. Patients must be fully aware of the procedure done and must behold their operative record. Regain weight after Bariatric surgery can lead to a revision procedure. Sometimes, a default can be noted and corrected. Here the case is unusual, as the patient was convinced of having a RYGBP. Robotic surgery facilitated the procedure.

Conclusion

Regain weight after bariatric surgery, can be due to a default in the procedure, a late dilatation of the pouch, or alimentary disorder. Surgery can, in chosen case, explain the weight regain or the failure of permanent weight loss. Robotic use, enhance the feasibility and the safety of the procedure. Further study on such cases can contribute to establish a guide to decide which patient can be proposed revisional surgery for failure or weight regain.

V-37

FUNCTIONAL LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS WITH FUNDECTOMY AND GASTRIC REMNANT EXPLORATION (LRYGBFSE) - A VIDEO VIGNETTE

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Background

Laparoscopic Roux en-Y gastric bypass (LRYGB) is broadly considered the treatment of choice in severe obesity worldwide. However, difficult access to the gastric remnant and duodenum represents intrinsic limitation. The functional laparoscopic gastric bypass with fundectomy and gastric remnant exploration (LRYGBfse) is a new technique described in attempt to overcome the limitations of the LRYGB.

Objectives

The purpose of this video is to demonstrate the LRYGBfse in a 48-year-old man with type II diabetes and hypertension.

Methods

An intraoperative video has been anonymized and edited to demonstrate the feasibility of LRYGBfse.

Results

The operation starts with gastrocolic ligament opening. Staying close to the gastric wall, the stomach is prepared up to the angle of His. After the placement of a 36-Fr orogastric probe, gastric fundectomy is completed in order to create a 30cc gastric pouch. A polytetrafluoroethylene banding (ePTFE) is placed at the gastro-gastric communication, 7cm below the cardia, and gently closed after bougie retraction. The bypass is completed by the creation of an antecolic Roux-en-Y 150cm alimentary and 150cm biliopancreatic limb.

Conclusion

The LRYGBfse is a feasible and safe technique. The possibility to endoscopically explore the excluded stomach with an easy access to the Vater's papilla is a major advantage. Further studies are warranted to deeply explore and compare outcomes with the standard LRYGB.

V-38
GASTRIC BAND COULD BE A VALID OPTION IN LIVER CIRRHOTIC PATIENTS WITH OBESITY- LONG TERM FOLLOW UP: A CASE REPORT

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Clinical presentation

A 59-year-old male patient presented to our department in 2017 because of weight regain. His weight was 124.2 kg, length is 170 cm and BMI of 43. The patient had asthma, knee pain, snoring and alcohol abuse more than 8 years but he stopped in the past 7 months. The patient suffered from liver cirrhosis and portal hypertension that's why he took drugs to treat mild to moderate high blood pressure and

Preoperative Tests

Upper GI endoscopy showed limited fundus varices with no esophageal varices. Upper GI series showed cirrhotic liver conversion with clearly different elasticity values. No focal lesions. Portal hypertension and splenomegaly with substantial collateral circulation. Viral serology was normal.

Operative procedure

We performed a laparoscopic gastric band aiming to be away from fundal varices and minimizes dissection at that area.

Postoperative outcome

There were no post-operative complications. Discharge was on post operative day 1. At 9 weeks post operatively after gastric banding, the patient lose 18.2 kg from his weight and his BMI was 36.7. The patient had no complaints and felt no restriction (filling the band with 2 cc). Follow up 2 years after the banding, his weight was 98 kg (lose 26.2 kg) with a BMI 33.9. the patient had no complaints, feels fairly good restrictions (filling the band with 4.5 cc). At 5 years follow up, his weight was 103 kg, and start using weight loss medication, and has no complaints.

V-39

GASTRIC BYPASS WITH REMNANT RESECTION: A BAIL-OUT STRATEGY FOR HIGH-RISK PATIENTS

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Background

Roux-en-Y Gastric Bypass is still the gold-standard bariatric procedure. It is a metabolic surgery with long-term weight loss and remission of co-morbidities, has an excellent safety profile and most patients with GERD get long-lasting relieve of symptoms. However, the remnant stomach is not available for endoscopic surveillance which might preclude the early detection of a gastric cancer. As such, for patients at risk of gastric cancer, “classical” RYGB such be avoided. The usual alternative is to perform a sleeve gastrectomy, that maintains the continuity of the digestive tract. However, for some patients sleeve gastrectomy is not the ideal operation. RYGB with resection of the gastric remnant is a good alternative, with a small increase in operative time and risk of complications.

Objective

In order to present an alternative strategy for patients with obesity and significant risk of gastric cancer, we present a clinical case.

Methods

We present the case of a 40-year-old woman with a history of long-standing class 3 obesity (BMI 44 kg/m²) and poorly controlled metabolic syndrome (T2DM, hypertension) and grade B esophagitis. She had strong family history of gastric cancer (father and grandfather had died of gastric cancer) and an H. pylori infection. After multidisciplinary consultation, she was proposed for RYGB with remnant resection.

Results

The surgery was straightforward, and the patient was discharged on the 2nd post-operative day. One year after the surgery, the patient is doing well, with a BMI of 29 and no vitamin deficiencies under supplementation.

Conclusion

RYGB with gastric remnant resection might be a good bail-out strategy for candidates to RYGB with significant risk for gastric malignancy.

V-40
GASTRIC BYPASS WITH RESECTION OF THE REMAIN IN A PATIENT WITH REFLUX BILIARY AND MULTIPLE BARIATRIC HISTORY

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Background

A hepatobiliary inmodiacetic acid (HIDA) scan is an imaging procedure that may be useful in the diagnosis and subsequent treatment of bile reflux in patients with vertical gastrectomy.

Objectives

To present a video of a gastric bypass with resection of the remnant in a patient with bile reflux.

Methods

The case is presented of a 58-year-old woman with a medical history of numerous abdominal surgeries, the most important of which are a gastric balloon surgery (BIG) in 2009, a Primary Obesity Surgery Endoluminal technique endoscopy in 2011, a second BIG in 2013, which migrated to ileum, producing an intestinal obstruction which required laparotomy with enterotomy and vertical sleeve gastrectomy in 2016.

Results

The patient goes to the medical centre, with a BMI of 30, complaining of postprandial abdominal pain and continual vomiting, heartburn and dysphonia. An esophagogastric duodenal study showed a hiatal hernia and significant spontaneous gastroesophageal reflux disease (GER). The endoscopy confirmed the hiatal hernia, as well as gastric sleeve with bile lake and superficial pangastritis. The PHmetry showed GER of moderate intensity with De Meester 55,47 and an exposure time of PH <4 of 16.1%. A HIDA is carried out due to the suspicion of biliar reflux in the gastric remnant due to complications resulting from the multiple previous interventions. After administering an i.v. radiotracer, mebrofenina marked with [99m Tc], with an activity of de 222 MBq, dynamic images are acquired where we can observe an adequate and homogenous distribution of radiotracer in the liver parenquima, the bile duct and in front of this in the small intestine, detecting a leakage in the lower edge of the hepatic lobe. Subsequently, a SPECT/CT study of the abdomen was acquired which showed biliar leakage to the gastric remnant.

Conclusion

The patient was operated on via laparoscopy, carrying out a bypass with a gastrectomy of the gastric remnant. The patient was discharged 48 hours later without further complications.

V-41

GASTRO-GASTRIC FISTULA CAN BE TREATED CONSERVATIVELYMohamed El-Bery*Al Emadihospital, Laparoscopic & General Surgery, Doha, Qatar***Background**

Obesity is becoming an increasingly prevalent health issue, resulting in the frequent application of Roux-en-Y Gastric Bypass (RYGB) as a popular treatment. One of the complications post Roux-en-Y Gastric Bypass is Gastro-Gastric Fistula.

Objective

To review the durable treatment of the gastro-gastric Fistula post RYGB.

Methods

Retrospective a case study of 61-year-old female who had a history of complicated sleeve gastrectomy converted to RYGB and complaining of non-losing enough weight (her current weight is 114 kg and Body Mass Index of 41.9 kg/m² (Obese Class III)).

Results

Diagnostic radiology with Gastrografin showed large stomach pouch and wide stoma opening. The case underwent for resizing of the Stomach Pouch and Gastrojejunostomy stoma procedure. The procedure included as resizing of the stomach pouch, narrowing of gastrojejunostomy stoma and lengthening of hepatobiliary limb. Routinely post-operative Gastrografin showed a small Gastro-Gastric Fistula which may be exited before and missed to be diagnose pre revisional surgery. Treatment options was to wait and observe. After 4 months post-surgery follow-up, diagnostic GI Gastrografin showed that the fistula was totally closed without side effect. Also, patient successfully lost 22 kg of her weight (reached weight 90 Kg).

Conclusion

gastro-gastric Fistula post-surgery can be treated conservatively. Also, regular follow-ups with Gastrografin required to monitor the fistula, which resulting in successful weight lost.

V-42

GASTRO-GASTRIC FISTULA WITH SEVERE ESOPHAGITIS AND POST-BYPASS PYLORIC SYNDROME – SURGICAL TREATMENT

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Background

A 68 year-old female patient with a history of gastric bypass presents with epigastric pain, vomiting, nausea, weakness and excessive weight loss. Investigation revealed malnutrition, anemia, severe esophagitis, esophagogastric fistula, gastro-gastric fistula, small gastric pouch and pyloric stenosis in the excluded stomach.

Objectives

To present the management and surgical treatment of a complex post-operative complication.

Methods

Initial conservative treatment included three weeks of NPO, enteral nutrition and clinical support. After this phase, upper endoscopy revealed great improvement of esophagitis level and full closure of esophagogastric fistula. Surgical treatment comprised dissection of multiple adhesion from previous surgery, identifying with help of transoperative endoscopy and resecting the gastrogastic fistula, followed by resection of the excluded stomach.

Results

Patient had a great post operative evolution, being discharged within a week from the procedure.

Conclusion

We presented a feasible surgical treatment for a challenging post-operative complication in a complex patient. Clinical support and multidisciplinary approach must be included as crucial part of the treatment.

V-43

GASTROGASTROSTOMY: A SURGICAL ALTERNATIVE TO GASTRIC BYPASS FOR ANGULARIS STENOSIS AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY

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Background

Reflux post laparoscopic sleeve gastrectomy (LSG) is multifactorial. Identifying the aetiology of refractory reflux is key to guiding management. Angularis stenosis is a recognised but poorly defined potential cause of post-LSG symptoms. While endoscopy is helpful in diagnosis and treatment of strictures, is often subjective, and functional stenosis can be underdiagnosed. 3-Dimensional CT (3DCT) scans can be effective in delineating gastric anatomy and complications. However, no uniform methods exist for reporting these scans nor defining normality/abnormality.

Purpose

Establish measurements that constitute and are associated with clinical stenosis on 3DCT scan as an approach to standardise post LSG anatomy assessment.

Methods

Retrospective study of patients undergone 3DCT following LSG for weight regain and/or reflux symptoms. Clinical & demographic data including age, gender, BMI, Symptomatology invoking scan and investigations including endoscopy, Manometry & pH monitoring were collected. 3DCT measurements including angularis angle (AA), surface area (ASA), proximal (PMSA), distal maximal surface area (DMSA), Gastric conduit Length (GCL) & Oesophageal diameter (OD) were recorded. Patients grouped according to endoscopy findings and their 3DCT indications. R software used for statistical analysis.

Results

64 patients (20% males) identified. Preop BMI and at 3DCT were 45.57 (± 8.3), 36.3 (± 8.7), surgery to scan period 6.2 (± 6.9) years. 71.8% had reflux and/or regurgitation/ dysphagia, the rest had weight regain alone as indication for 3DCT. Gastric volume, (ASA) (10.1 ± 4.2 cm²), and (DMSA) (21.2 ± 4.1 cm²) were less in those with endoscopic findings of stenosis/reflux ($p=.002$) and ($p=.007$) respectively. (AA) and (PMSA) of conduit were lower in endoscopic findings of stenosis/reflux group, and in patients presenting with reflux/regurgitation/dysphagia respectively but lacked statistical association. The latter group however had lower BMI on multivariate analysis. Furthermore, (OD) and (GCL) were higher in those with lower (AA) ($p=.008$) and ($p=.01$). Duration between LSG and 3DCT strongly correlated with higher BMI at 3DCT, longer conduit length and higher PMSA.

Conclusion

Correlation exists between clinical stenosis and 3DCT measurements. 3DCT can help predict and guide further treatment of post LSG refractory reflux and regurgitation.

V-44
GASTROSCOPIC SURGERY: LAPAROSCOPIC INTRA-GASTRIC SURGERY FOR OBSTRUCTION AFTER VBG

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Background

55 year old female with a history of open vertical banded gastroplasty presenting with dysphagia, regurgitation and heartburn. She has had symptoms for 10 years but it is progressively worsening, causing a choking sensation when laying supine.

Objective Findings

BMI of 34.6 m²/kg. CT imaging with dilation of the stomach proximal to the silastic ring from her prior VBG. Upper endoscopy confirms dilated proximal stomach, a stricture where the external ring is, and the non-divided staple lines remains intact.

Methods

Patient was evaluated with CT imaging with PO contrast and upper endoscopy. After these findings listed above, patient was consented for diagnostic laparoscopy to relieve the obstruction

Results

Patient went to the OR for diagnostic laparoscopy, transgastric laparoscopy with intra-gastric division of the obstructing ring using a powered stapling device. She was then started on clear liquids and her diet was slowly advanced back to soft food over the course of a week. She tolerated surgery and her post-operative course without any issues and is doing well in follow up.

Conclusions

Intra-operative endoscopy is critical in revisional bariatric surgery. Revisional bariatric surgery is getting more common as the field grows. Revisional surgery often requires thinking outside the box to provide safe and effective care.

V-45

HETEROTOPIC PANCREAS RESECTION WITH CONCOMITANT SLEEVE GASTRECTOMY: VIDEO CASE-REPORT

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Introduction

Ectopic pancreatic tissue is a rare entity, where pancreatic tissue is found in extra-pancreatic location with no anatomical nor vascular connection to the pancreas. It is found incidentally during laparotomy in 0.2% and autopsy specimens in 0.5–14%. It could be found anywhere from esophagus to colon; however, it mostly occurs in stomach in 25-40% and mostly it is asymptomatic.

Objectives

We report in a video a case of laparoscopic heterotrophic Pancreas resection with concomitant Sleeve gastrectomy for morbid obesity.

Methods

Data of the case of post heterotrophic Pancreas resection were collected retrospectively and reported in a video with its intra-operative findings and its concomitant management.

Results

Here we report a 19-year-old male, not known to have any medical illness, suffers from morbid obesity with a BMI 49.8kg/m², presented to bariatric surgery clinic. On routine pre-operative assessment, Esophago-Gastro-Duodeno-scope (EGD) revealed an incidental 3cm submucosal mass in gastric body. Biopsy was inconclusive. Computed tomography of abdomen revealed 3cm solitary submucosal mass at distal gastric body near greater curve; the commonest differential was gastrointestinal stomal tumor. After counselling, sleeve gastrectomy, with mass free-margin resection was performed laparoscopically using 4ports, under the guidance of a 36-french calibration tube, intra-operative EGD confirmed the complete excision. Patient discharged on the next day. On 2 weeks post-operative, patient was seen in good condition and 15kgs loss. No perioperative complications were sustained. Histopathology revealed 2.5X2.2cm ectopic pancreatic tissue with 1cm free margin.

Conclusion

With the increasing number of bariatric procedures done worldwide, we encounter more and more rare conditions. To the best of our knowledge there are very few cases of ectopic pancreas reported in relation to bariatric surgery. In our case we demonrs safe and did not add any morbidity.

V-46
HIATAL HERNIA AFTER GASTRIC BYPASS: SURGICAL REPAIR

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Background

Gastric bypass is still considered the gold-standard bariatric surgery. This weight loss surgery is a safe and effective treatment for morbid obesity and associated metabolic impairments. Its long-term complications are rare but might include mechanical obstructions. Symptomatic obstruction caused by hiatal herniation is very rare, with very few cases described. The pathophysiology of hiatal hernia after gastric bypass may result from several predispositions in these patients, such as changes in tissue strength due to rapid weight loss or dissection injury of the diaphragm crura. However, due to the gastro-jejunal anastomosis, most hiatal hernias remain asymptomatic.

Objectives

In order to better summarize this rare complication, we present a clinical case.

Methods

We present the case of a 59-year-old patient that reported dysphagia, intolerance to solid food, epigastric pain and heartburn in the follow-up after laparoscopic Roux-en-Y gastric bypass. Abdominal CT described a sliding hiatal hernia with the gastric pouch and gastro-entestinal anastomosis in the thoracic cavity. Surgical repair of this defect was accepted by the patient.

Results

This video shows a laparoscopic hiatal hernia repair. After complete dissection and mobilization of the gastric pouch and distal esophagus, we performed a cruroplasty reinforced with a bioabsorbable mesh. To prevent relapse and reflux, we carried out a fundoplication with the gastric remnant from the index surgery. There were no surgical or post-operative complications and the patient was discharged at POD 2. At the post-operative follow-up visit, the patient reported improvement of heartburn, dysphagia and pain with still sporadic solid food intolerance. Slow progression of diet was precluded and the food intolerance improved with time.

Conclusion

Although rare, symptomatic hiatal hernias after RYGB might need surgical treatment. Complete and careful dissection of the gastric pouch, anastomosis and distal esophagus is required and the use of the remnant fundus, might help in relieving symptomatic reflux.

V-47

HIATOPLASTY AND CARDIOPEXY OF THE TERES LIGAMENT AS AN ALTERNATIVE FOR GASTROESOPHAGEAL REFLUX DISEASE

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Background

A significant percentage of patients undergoing primary or revision bariatric surgery after sleeve gastrectomy (SG) present symptomatic gastroesophageal reflux disease (GERD). There are different strategies to treat it, however, gastric bypass seems to be the preferred option. GERD is a disorder of the upper gastrointestinal tract which develops when reflux of stomach contents causes bothersome symptoms and/or complications. When GERD occurs after SG, many options have been considered, including hiatal hernia repair, conversion to gastric bypass (GB), or others such as LINX magnetic sphincter placement. In this video, we present a surgical alternative, such as the Teres cardiopexy, using the round ligament to achieve an almost complete restoration of the function of the esophagogastric junction (GEJ).

Objective

The objective is to present a surgical alternative for the treatment of GERD post conversion from SG to GB presenting a video of the procedure.

Method

This is a 60-year-old female patient with a BMI of 40 kg/m², who underwent gastric sleeve in 2017. Subsequently, after adequate weight loss with a BMI of 24 kg/m², she presented reflux symptoms and it was decided to convert to bypass in 2018. The patient continued with symptoms of reflux that did not subside with proton pump inhibitors and grade C esophagitis was observed on endoscopy.

Result

We performed a closure of the hiatus and cardiopexy with round ligament. One year follow up with no GERD or complications.

Conclusions

Surgical reinforcement of the lower esophageal sphincter in the GEJ to restore function is necessary to prevent acid reflux. In patients who have undergone GV conversion to GB is the best option. However, some patients choose not to have a bypass and have the option of having a surgical reinforcement of the lower esophageal sphincter to prevent acid reflux. Round ligament cardiopexy ensures lengthening of the abdominal portion of the esophagus and anchors the antireflux assembly within the positive pressure environment of the abdomen in a strong and flexible manner. Round ligament cardiopexy combined with closure of the gastric pillars is a late treatment alternative for GERD in patients with previous GV and hiatal hernia.

V-48
HOW I PERFORM OAGB

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Background

The MGB-OAGB is growing fast in popularity as it is a simple save effective procedure as comparison with other gastric bypass .e.g, RYGB. It seems to have better results in terms of weight loss & control of diabetes, hypertension, etc.

Objectives

The objective of the video is to educate the young surgeons on how to perform MGB-OAGB with some modification which shows better results and outcomes in comparison to other techniques.

Methods

The technique has been elaborated in detail in the video which shows how to place the trocars, liver retraction, creating a window in the lesser sac, making a long gastric pouch, making a gastrostomy, counting the bowel loops from the ligament Trietz, creating entrotomy and performing gastrojejunostomy, performing leak test & hitching of BP Limb.

Results

The results of the modified technique of MGB-OAGB are promising and much more favourable than conventional gastric bypass techniques. The study on this technique in our institution is under review for final publication.

Conclusion

The MGB-OAGB technique is effective bariatric procedure for weight loss and resolution of the co-morbidities. This modifies technique of MGB-OAGB makes it more simpler, effective and innovative than the conventional techniques.

V-49

HOW TO MANAGE STAPLER MISFIRE DURING SLEEVE GASTRECTOMY

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Background

Sleeve Gastrectomy is the most commonly performed procedure in the world. As the numbers of sleeve gastrectomy are increasing, there is an increase in complication rate also. A staple misfire is a potential complication that can occur during sleeve gastrectomy. A staple misfire occurs when the staples fail to fire or do not form a complete seal. This can result in a leak or opening in the stomach wall, which can lead to serious complications such as infection, bleeding, or even death.

Objective

To manage stapler misfire during sleeve gastrectomy.

Method

Sleeve Gastrectomy was being performed on a patient with BMI 40 and we had a stapler misfire and tissue drag resulting in complete opening up off sleeve and we sutured it with GCT insitu.

Results

We have patient with BMI 40 post of Sleeve Gastrectomy had a stapler misfire which was managed on table with suturing.

Conclusion

Overall, preventing stapler misfires during sleeve gastrectomy involves using proper technique, verifying stapler placement, and having backup tools available. If a misfire occurs, it's essential to stay calm, assess the situation, and take immediate action to address any complications and to prevent further leak.

Keywords: Stapler Misfire, Sleeve Gastrectomy.

V-50
HOW TO RESECT AN INCIDENTAL GASTRIC MASS AT THE GE-JUNCTION DURING GASTRIC BYPASS?

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Background

Incidental findings during bariatric surgery can present diagnostic and treatment challenges. We present a simple modification of Roux-en-Y Gastric Bypass technique to resect an incidentally found mass at the gastro-esophageal junction (GEJ) and allow concomitant completion of the Roux-en-Y Gastric Bypass (RYGB) for obesity.

Objectives

To demonstrate a modified technique that allows for resection of benign masses located at the GEJ during RYGB

Methods

We are presenting a video of a patient (BMI=50 Kg/m²) who was found to have a hiatal hernia during a routine RYGB. As the hiatal hernia was opened, a 2x3 cm mass was identified. An intra-op endoscopy by the bariatric team confirmed the submucosal location of the mass at the GEJ/Angle of His without mucosal changes. We planned to remove the mass with a 2 cm margin by dividing the stomach using a linear stapler between a window in the lesser curvature and the angle of His with a 2-cm margin. Prior to dividing the stomach, the anvil of the #25 circular stapler was inserted into the stomach and exteriorized in the medial aspect of the cardia and the lesser curvature. The gastric pouch was then created with a linear stapler from the lesser curvature to 2-cm oral to the mass at the GEJ. Subsequently, the mass was then removed with a wedge resection of the Angle of His and the fundus of the stomach using a linear stapler. Once the frozen section did not show a malignant neoplasm, the gastro-jejunostomy was completed using a circular stapler technique. The jejuno-jejunostomy was done using the linear double-stapled technique. The hiatal hernia was repaired with a posterior cruroplasty. Three patients underwent resection of GEJ tumors during RYGB and recovered without incident. They had appropriate weight loss. No anastomotic complications were recorded.

Conclusion

The incidence of benign gastric tumors is <1% and the majority are <2 cm in size. Technical modifications while creating the gastric pouch are needed to resect incidental tumors with oncologic margins.

V-51

HUMAN ERROR DURING RYGB LEADING TO MISALIGNED ANATOMOSIS

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Background

LRYGB has several complications such as dumping syndrome, anastomotic leak or stricture, anastomotic ulcer, hernia, infection, or human error. Research suggests that human error can be due to 1 of five factors: Planning/problem solving, execution, rules violation, communication, or teamwork.

Objective

We present the case of errantly misplaced jejuno-jejunal anastomosis due to human error during a laparoscopic RYGB.

Methods

The patient is a 30 year old woman with BMI 39.2 few years after laparoscopic sleeve gastrectomy, who presented for laparoscopic RYGB. After the creation of the jejuno-jejunal anastomosis, we realize that, due to human error, the limbs were wrongfully positioned and reconstructed so that the normal intestinal peristalsis is not respected as by the below image (a). The biliary limb was misaligned in an anti-peristaltic manner due to a missed errant anastomosis.

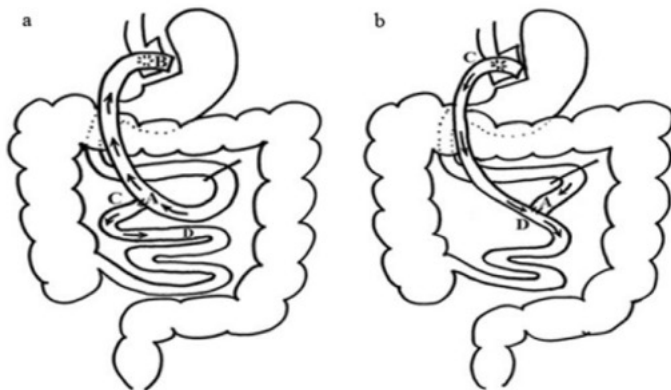


Fig. 6. (a) Jejunal Roux limb was positioned errantly in anti-peristaltic orientation at index RYGB. (b) Massively dilated antiperistaltic Roux limb resected between points B and A and isoperistaltic Roux limb used to complete gastrojejunostomy (C) and jejunojejunostomy (A-D).

Nelson LG, Sarr MG, Murr MM. Errant and unrecognized anti peristaltic Roux limb construction during Roux-en-Y gastric bypass for clinically significant obesity. *Surg Obes Relat Dis.* 2006 Sep-Oct;2(5):523-7. doi: 10.1016/j.soard.2006.07.009. PMID: 17015205.

Results

The anastomosis is disassembled, and a new tension free anastomosis was performed and handsewn to reposition the loops and reassert their vascular supply as by the above image (b). Anastomosis alignment and patency were confirmed. Hemostasis and leak test were assured and successful.

Conclusion

A missed errant anti-peristaltic anastomosis would manifest post-operatively with unspecific signs and symptoms which include persistent nausea, bilious vomiting, and subacute intestinal obstruction in the immediate postoperative period. We believe it should be a rule of thumb to reassess all anastomotic sites and mesenteric roots through a “second look” prior to terminating all surgical procedures. This allows for immediate repair and avoidance catastrophic complications post-operatively.

V-52

INCARCERATED TYPE IV HIATAL HERNIA AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY PERFORMED AT A MEDICAL TOURISM ORGANIZATION FURTHER COMPLICATED BY AN EMPYEMA

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Background

The patient is a 38-year-old female who underwent laparoscopic sleeve gastrectomy at a medical tourism organization. The patient was discharged on post-operative day 2 and soon after developed abdominal pain, nausea, and inability to tolerate diet. On post-operative day 7, the patient presented to our institution, and imaging demonstrated a hiatal hernia containing small bowel with a transition point causing a complete small bowel obstruction. The patient was taken to the operating room for laparoscopic reduction and repair of the hiatal hernia and gastrostomy tube placement. The patient was discharged on post operative day 6. On post-operative day 10, the patient underwent a repeat CT scan due to persistent tachycardia. This revealed a loculated empyema in the left chest. Cardiothoracic surgery was consulted, and the patient underwent video-assisted thoracoscopic decortication. The patient was discharged on post operative day 6 from the decortication. The patient recovered well, and the gastrostomy tube was removed in office 6 weeks after placement.

Objectives

Our objective is to demonstrate the risks of medical tourism and the possible complications of a hiatal hernia coinciding with a sleeve gastrectomy.

Methods

This is a case review of a patient who underwent a laparoscopic sleeve gastrectomy at a medical tourism organization who suffered from a post-operative type IV hiatal hernia requiring repair. This was further complicated by an empyema which also necessitated surgical intervention.

Results

The patient recovered well after requiring two additional surgeries following the sleeve gastrectomy.

Conclusion

This patient suffered from a hiatal hernia containing small bowel after undergoing laparoscopic sleeve gastrectomy at a medical tourism organization. Pre-operative workup prior to the sleeve gastrectomy is unknown. The patient's course was further complicated by the subsequent development of an empyema requiring thoracoscopy and decortication. This case demonstrates that medical tourism can be dangerous, pre-existing hiatal hernias must be considered before performing sleeve gastrectomy, and care should be taken to adequately close hiatal hernia defects if encountered at the time of laparoscopic sleeve gastrectomy.

V-53

INDOCYANIN GREEN USE DURING GASTRIC BYPASS REVISION FOR GASTROGASTRIC FISTULA. FISTULA IDENTIFICATION

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Background

Gastrogastric (GG) fistula is rarely described in the bariatric literature, however it might appear after Roux-en-Y gastric bypass (RYGB), which has been documented to be around 0.1-6% in different series.

Objectives

The aim of this video was to expose indocyanin green (ICG) as an intraoperative resource that helps recognizing the organs within a bariatric revisional surgery.

Methods

This is a case of a 54 years-old woman who underwent a RYGB in 2008. She previously had 54 Kg/m² of BMI with an excellent weight loss result. In 2018, she complained of vomiting and pain and she was diagnosed of GG fistula by an upper gastrointestinal (UGI) series. Consequently, she was in revisional surgery in another centre. Firstly, due to multiple adhesions, the GG fistula duct was only cut off and cholecystectomy was also performed. Afterwards, in 2021, she began with similar symptoms and GG fistula was diagnosed again by UGI series and abdominal CT. Finally, she was referred to our hospital and partial gastrectomy with restoration of the gastrojejunal anastomosis (GJA) was proposed.

Results

This video is a revisional laparoscopic approach. Firstly, adhesions from the gastric pouch were removed to separate it from the gastric remnant (GR). At this moment, oral ICG was used to identify the GG fistula and ICG was clearly passing through the fistula duct to the GR. The GJA was divided and partial gastrectomy of GR was performed. The new GJA was double layer handsewn and tested for leaks. During the postoperative period, she remained stable without fever and abdominal pain controlled. She required an *iv* iron infusion due to postoperative hemoglobin of 9.4g/dL. Intrabdominal drain was removed at the second day and she left at third day.

Conclusions

Revisional bariatric surgery should be performed in centres of excellence with well-trained surgeons. Different surgical scenarios have to be considered in order to prepare the revisional surgery. Oral ICG can be an intraoperative resource that allows you to do surgery more safely.

V-54
INNOVATIVE TECHNIQUE IN CONVERSION OF ONE ANASTOMOSIS GASTRIC BYPASS TO SLEEVE GASTRECTOMY

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Background

One Anastomosis Gastric Bypass (OAGB) demonstrated results similar to Sleeve Gastrectomy regarding weight loss and resolution of obesity-related comorbidities. The main controversy regarding OAGB concerns an association with biliary alkaline gastritis. In this particular case presentation, the patient refused to be converted into any bypass surgery. Also, we found that converting OAGB to Sleeve Gastrectomy is feasible and safe. The idea comes from the technique used for converting Roux-en-Y to Sleeve Gastrectomy.

Objectives

To find a safe surgery after OAGB complications, which may present with severe malnutrition, severe bile reflux, and severe weight loss?

Methods

We present the case of a 42-year-old woman with a BMI of 41 kg/m² who underwent a laparoscopic OAGB in 2020. One year later, her weight decreased from 240 (preoperative) to 78 kg at presentation; she presented with repeated vomiting, biliary reflux, and severe malnutrition. Her hemoglobin level was 5 gm one month before the scheduled corrective surgery. She received four units of packed RBCs with conservative management, and the hemoglobin rose to 11.5 gm. Other laboratory findings were unremarkable. Upper GI endoscopy showed biliary gastritis of the pouch. Preoperative CT volumetry showed a small hiatus hernia (3 cm), gastric pouch: 130 cc, CJ anastomosis: 1.8 cm.

Results

Postoperative CT volumetry results. Post-sleeve gastric pouch volume of about 122 ml. No collections or contrast leakage.

Conclusion

In patients refusing bypass surgery, we suggest converting to Sleeve Gastrectomy as a salvage procedure that may prevent undesirable weight regain with the total reversal. We recommend collecting feedback from Bariatric Surgeons regarding this technique. Long-term outcomes should be considered in further large-scale studies.

V-55

INTERNAL HERNIA POST LAPAROSCOPIC SLEEVE GASTRECTOMY, AN UNUSUAL COMPLICATION: VIDEO CASE REPORT

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Background/Introduction

Internal hernia is a well-recognized complication after laparoscopic Roux-En-Y Gastric Bypass. Recently, it has been recognized after Laparoscopic One-anastomosis Gastric bypass. Alteration of bowel anatomy was put as the cause of internal hernia after these procedures. Laparoscopic Sleeve gastrectomy is one of the most commonly performed bariatric procedures worldwide, it was hypothesized that internal hernia could not occur after sleeve gastrectomy.

Objectives

We report in a video a case of internal hernia occurred post laparoscopic Sleeve Gastrectomy and its concomitant management.

Methods

Data of the case of post SG internal hernia were collected retrospectively and reported in a video with its intra-operative findings and its concomitant management.

Results

The patient is a 35-year-old male. He underwent laparoscopic sleeve gastrectomy which was complicated by leak. and it was managed conservatively with great success. He presented seven years after his surgery to emergency department with history multiple episodes of severe left upper abdominal pain. a CT scan was performed showing suspicion of internal hernia. Patient was taken for emergency laparoscopic exploration. Intra-operatively, there was a band of adhesion from previous leak site connecting a loop of proximal jejunum to anterior abdominal wall forming a 5 cm defect. Through it, a loop of bowel was found herniating with partial twisting of its mesentery and engorgement of its vessels. In addition, there were multiple adhesions between bowel loops. The herniated bowel loop was reduced with no evidence of ischemia. The adhesive band was resected using laparoscopic linear stapler. The Bowel was fully inspected from ileo-cecal valve up to DJ flexure with full adhesolysis performed. Patient recovered well. He was discharged on day one post operatively. He was followed up with complete resolution of his symptoms and no complications.

Conclusion

We conclude that internal hernia could occur as a long-term complication of sleeve gastrectomy leaks. high index of suspicious should be applied when dealing with vague abdominal pain post bariatric surgery. Laparoscopic approach was safe and feasible.

V-56

INTERNAL HERNIATION POST LAP MGB-OAGB – A RARE ENTITY

Zafar Iqbal Gondal

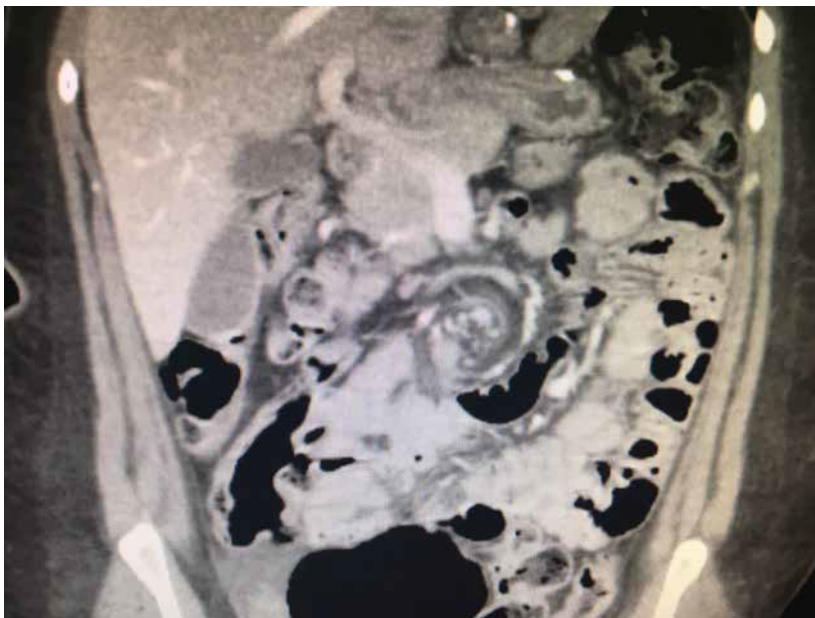
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Introduction

Bariatric surgery is becoming one of the most common general surgery procedures in United Arab Emirates. Abdominal pain after gastric bypass is a common complaint and etiology can be difficult to identify. While some causes are non-life-threatening but vague, non-explained abdominal pain in patients with LMGB should raise a suspicion of internal hernia (IH).

Methods

Since 2011, our institution has performed more than 2000 Laparoscopic Mini Gastric Bypass procedures (LMGB). Two patients recently presented with vague abdominal pain, nausea, and vomiting after (LMGB). CT scans were initially read as mesenteric twisting/Swirl sign in both patients.



CT Scan Image.

Results

CT scans were retrospectively reviewed and findings suggestive of Spiraling of mesenteric vessels at the root with mesenteric haziness suggesting internal herniation.

Conclusions

Post-Mini Gastric Bypass patients with these CT findings and persistent abdominal pain, should be considered for prompt diagnostic laparoscopy.

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V-57

INTRAGASTRIC SINGLE-PORT SURGERY (IGS) ACCESSES THE GASTRIC REMNANT AND ALLOWS GIST RESECTION, GASTRIC BAND EXTRACTION AND ERCP AFTER RYGB: A SIMPLE SOLUTION FOR A DIFFICULT PROBLEM

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Background

Patients who have undergone a Roux-en-Y-Gastric Bypass (RYGB) and suffer from choledocholithiasis postoperatively pose a medical dilemma. Other patients with intragastric tumors as GISTs and Leyomyomas have difficult surgical strategy. The gastric remnant and duodenum are isolated from the pancreaticobiliary limb, making endoscopic retrograde pancreatography (ERCP) challenging and often impossible.

Objectives

We describe a method for safe introduction of the endoscope into the gastric remnant through intragastric single port surgery (IGS), for ERCP and excision of gastric tumors and gastric bands.

Methods

The present study is a non-randomized clinical series describing our preliminary results using a transgastric inserted Single Port device for ERCP after RYGB. The series includes 23 patients who underwent IGS for ERCP or gastric tumors or bands.

Results

The technique was successfully applied for intraoperative ERCP through a transgastric inserted Single Port device (Gelpoint Mini, Applied Medical, Rancho Santa Margarita, CA, USA). Papilotomy was easily achieved without complications. Average Operative time was 38 to 144 min. The patients recovered without complications and could be discharged after a mean of 4.38 days.

Conclusions

The novel IGS technique is safe, effective and can be applied to perform resection of gastric bands, tumors or ERCP in patients with RYGB anatomy. Transgastric Single Port endoscopic retrograde cholangiopancreatography was simple to perform, achieved excellent results, and allows for endoscopic treatment and cholecystectomy to be performed in a single procedure.

V-58
INTRA-OPERATIVE TOUGH DECISION (ACCIDENTAL STAPLING THE ORO-GASTRIC TUBE)

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Background

Laparoscopic sleeve gastrectomy has become the most popular bariatric surgical operation. Based on the lesser curvature, the sleeve is created with endo-staplers, which separate the lesser curvature longitudinally and vertically from the rest of the stomach, including the greater curvature.

Objective

We had a female Patient, 23 years old with a BMI 41 Kg/m² and no Co-morbidities. The decision was Laparoscopic Vertical Sleeve Gastrectomy.

Method

During the procedure, an accidental stapling over the oro-gastric tube which missed by our anesthesia team beside the bougie, we were dissect the stomach around the tube to making it free and removed from the patient's mouth. Two stay sutures were taken at the upper and lower end of the defect, these sutures were used to pulling the defect in the stabler and excising this part of the stomach.

Result

The oro-gastric tube was freely removed and the gaped wound of the stomach was safely excised.

Conclusion

The Intraoperative oro-gastric tube stapling is a serious complication that should be prevented; when it happens, correction is mandatory. At the intra-operative tough decisions, keep calm and think with moving fast to avoid more damage.

V-59

LABG TO LSG TO OAGB TO UNDOING TO LAPAROSCOPIC SLEEVE GASTRECTOMY TO MANAGE BLOATING AND DIARRHEA

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Introduction

One Anastomosis Gastric bypass (OAGB) is one of the most performed surgeries for weight-loss. It involves creating a small pouch from the stomach and connecting the newly created pouch directly to the jejunum, about 150-200 cm from the DJ. OAGB has the advantages of being simple and effective metabolic surgery, however longer-term risks and complications of gastric bypass may evolve starting from malnutrition to dumping syndrome and alsodiarrhea, bloating and bad stool odor affecting quality of lives of the patients.

Objectives

We present here 44 years old female patient with no comorbidities. The patient underwent adjustable gastric band, laparoscopic sleeve gastrectomy with removal of the band after 1 year from the previous operation. Twelve years later she underwent one anastomosis gastric bypass due to weight regain. Since then, the patient has attacks of diarrhoea, bloating and offensive stool odour. Proper assessment was done in our facility with laboratory and radiological investigations, decision was to undo the bypass and go for laparoscopic sleeve gastrectomy.

Methods

Laboratory and imaging investigations revealed anaemia and electrolytes disturbance, corrected before surgery. Laparoscopic undo of OAGB post sleeve gastrectomy was done, dismantling of the gastrojejunostomy then gastro-gastrostomy between the stomach pouch and the remaining part of the stomach creating the continuity of sleeve gastrectomy.

Results

The patient was discharged POD2, following uneventful recovery on clear fluids, full fluids, soft diet, and regular diet each one for 5 days respectively. The patient was put on nutritional plan including the diet plan, supplements and multivitamins needed for her. Follow up monthly was done revealed significant improvement of the bowel motions, offensive odour, and general condition.

Conclusion

OAGB is one of the most important surgeries in management of morbid obesity. Complications from this surgery should be managed in a systematic way to improve the outcome of the surgery. Laparoscopic conversion of RYGB to sleeve gastrectomy may be considered to overcome complications like malnutrition and frequent bowel motions.

V-60
LAGB TO RYGB TO OPEN PROXIMALIZATION TO LSG TO MANAGE SEVERE DUMPING SYNDROME

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Introduction

Revisional bariatric surgery is performed to repair a previous weight loss surgery. It might be appropriate if there is less-than-optimal weight loss, weight regain, or if. There are complications from the original procedure. Complications include ulcers, pouch enlargement, reflux, or unsatisfactory lifestyle. Revisional surgeries are often more complex than initial bariatric surgeries, thus it needs skilled professional surgeons for better evaluation of the condition, reviewing of the case, determination of causes of failure of the previous procedure and put the most appropriate plan of management to achieve the best outcome.

Objectives

We present here a case of 56-year-old gentleman, known to have uncontrolled diabetes mellitus, hypertension, osteoarthritis and dyspnoea grade 3. The patient has morbid obesity with starting weight 160kg (BMI ~56.7) underwent adjustable gastric band with weight regain reaching 189 kgs in 4 years with no improvement of diabetic status, the patient went for RYGB as a revisional surgery after removal of the band with good weight loss and better control of the diabetic status; but the patient developed severe attacks of dumping symptoms failed to be improved with medical treatment, lifestyle modification, and even after open proximal alimentary diversion surgery. The patient presented to our facility with 134 kg (BMI ~47.5) underwent laparoscopic conversion RYGB to sleeve gastrectomy.

Methods

Laboratory and imaging investigations was done including MSCT gastric volumetry which revealed gastric pouch size from 50-75cc with hiatus hernia. Laparoscopic sleeve gastrectomy was done after resection of the gastrojejunostomy part, anastomosis between the alimentary and biliopancreatic limbs as restoration of GI continuity and dismantling of the previous jejunojejunostomy.

Results

The patient was discharged POD2, following uneventful recovery on clear fluids, full fluids, soft diet, and regular diet each one for 5 days respectively. The patient was put on nutritional plan including the diet plan, supplements and multivitamins needed for him. Follow up monthly was done revealed significant improvement of the dumping symptoms, improvement of the diabetic status, and relative improvement in weight loss (109 kgs, BMI~38.6).

Conclusion

LSG after RYGB is a tedious procedure with only few cases found in literature.

V-61

LAPAROSCOPIC BAND REMOVAL. A WISE DECISION

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Introduction

Laparoscopic adjustable gastric band (LAGB) insertion was a frequently employed restrictive approach worldwide, favored for being minimally invasive and reversible. However, it has been shown to be unable to provide long-term solution for obesity and also it has high complication rates.

Objective

In this video we present the case of a LAGB removal due to complete intolerance, vomiting and malnourishment. We outline the risk of slipping and herniation.

Clinical Case

A 45 year-old woman with a LAGB settled in 2016 with BMI of 42 and no comorbidities. Frequent vomiting from the beginning, she lost follow-up. Until 2020, she weighed 70 kg. In the last year, minimal intake and worse vomiting, losing 20 kg. Band was deflated in a private center, but she got worsen. Nowadays: weight: 49 kgrs. BMI: 17.

Supplementary Tests

Barium 02/2023: Significant dilatation of the esophagus and the stomach with difficulty in the esophago-gastric transit. The gastric band is mispositioned and migrated distally towards the antrum, absence of gastric emptying. High Endoscopy 02/2023: Los Angeles grade A peptic esophagitis. Retention stomach, the band does not seem to be included. Normal mucosa. Endocrinologist assessment: Moderate-severe mixed malnutrition.

Surgery

03/2023. Fully slid gastric band located at the antrum, stomach dilatation due to a fibrous ring of the omentum and of the scar band. Stenosis and herniation of part of the stomach below the band. We released the entire scar band that covers it and reduced the stomach herniated. During the tough dissection, we made a hole in the stomach. A little piece of the fundus was resected. Adhesions were released of lesser curvature to the liver. Tightness was checked with blue methylene.

Postoperative

Without complications.

Conclusions

LAGB has been shown to have significant complications including pouch enlargement, band slipping, band erosion and intragastric band migration. Almost 40% of patients experience major complications, 22% minor complications and almost 50% require reoperation. Slipping band can have serious consequences as obstruction and malnutrition. A simple erect chest X-ray can often reveal band migration. Surgical removal of the band is mandatory in these cases and it could entail a challenging revisional procedure.

V-62

LAPAROSCOPIC CONVERSION OF SILSTIC RING VERTICAL GASTROPLASTY TO ONE ANASTOMOSIS GASTRIC BYPASS WITH DIAPHRAGMATIC HERNIA REPAIR

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Background

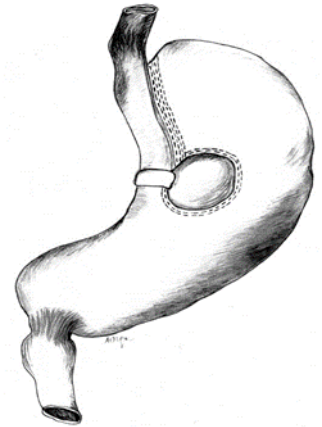
In the 1980s and 1990s, SRVG surgery was very common, especially in the absence of the laparoscopic approach and the need to find a restrictive surgery that would meet the need for weight loss surgery. The surgery was performed with an open approach during which an elongated pouch was created as a direct continuation of the esophagus and along the small curve, at the lower end of the narrow lumen was surrounded in a silastic ring.

Objectives

The conversion of SRVG to laparoscopic restrictive surgeries encountered many difficulties and most of them failed, additional studies that examined the conversion of SRVG to Roux-en-Y gastric bypass (RYGBP) or single gastric bypass (OAGB) showed very encouraging results and even bypassed all the reasons for failure surgery and helped establish gastric bypass as a preferred choice for SRVG surgery conversion.

Case report

A 49-year-old female patient underwent vertical gastroplasty (SRVG). 26 years later, GERD symptoms recurred, and 7 years after surgery his weight gradually increased (BMI of 43 kg/m²). Gastroscopy and dual esophago-gastric fluoroscopy, which preceded surgery, showed a diaphragmatic hernia with reflux and a wide pouch of the pouch.



Methods

The procedure was performed laparoscopically. In the first step, the silastic ring was removed. The hiatal area was completely exposed during the procedure and the abdominal part of the esophagus was cleaned and exposed to gluten and returned to the abdominal cavity, crural repair was performed using a non absorbable suture. A pouch is divided when the fundus and body of the stomach is pulled laterally. The new suture line was done medial to the old SRVG suture line. A small gastrotomy was created in the posterior wall of the right corner of the pouch. The fundus and body of the stomach were removed because they appeared ischemic. Creation a 180 cm biliary limb, a 30 cc stomach pouch. The bowel is rotated clockwise and divided 180 cm distal to the ligament of Treitz using a 45 mm tan load laparoscopic stapler and gastro-jejunostomy was created by side to-side anastomosis. The opening defects were closed with barbed absorbable suture.

Results

The procedure was uneventful, and the patient was discharged on postoperative day 3.

Conclusion

The conversion of one anastomosis gastric bypass (OAGB) is safe and showed positive results, which helped establish the gastric bypass as the best technique for revisional SRVG.

V-63

LAPAROSCOPIC CONVERSION OF SLEEVE GASTRECTOMY TO ROUX-EN-Y GASTRIC BYPASS IN TOTAL COLECTOMY PATIENT

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Background

Indocyanine green (ICG) has been shown to be safe and effective in bariatric surgery, and its use has been associated with low risk of complications, such as bleeding or leakage. ICG is not commonly used in Roux-en-Y gastric bypass however, perfusion test seems to be promising. The case was about 41years old female patient with a past medical history of total colectomy due to mesenteric artery thrombosis caused by doble heterozygous MTHFR mutation, sleeve gastrectomy and severe gastroesophageal reflux.

Objectives

Verify tissue perfusion with ICG during Roux-en-Y Gastric bypass. Identify ischemic tissue perfusion during conversion surgeries, to reduce anastomosis leakage.

Methods

The bariatric-metabolic surgery was performed in a private institute in Lima, Peru. We use the Pinpoint laparoscopic fluorescence imaging camera. We administered 3ml intravenously of ICG to verify tissue perfusion.

Results

Patient High Resolution Manometry results: esophageal pressure 30, 36 and 62 mmHG, IRP 11.2mmHg, DCI 496 mmHG.cm.s, upright swallows 80% failed concluding Ineffective esophageal motility. PHmetry and impedance results where: acid exposure time 11%, DeMeester Score 41.8, MBNI 1.47kohm concluding Pathologic Esophagogastric Reflux. The 3D-CT Gastric Volumetry also showed intrathoracic migration of the sleeve gastrectomy. With these results, along with the patient, we made the decision to perform the conversion of sleeve gastrectomy to Roux-en-Y gastric bypass. During conversion of sleeve gastrectomy to Roux-en-Y gastric bypass, we verified adequate tissue perfusion with ICG. In the post operative outcome, the patient had no complications, no bleeding, no leakage and good tolerance to food intake.

Conclusion

The use of indocyanine green in bariatric-metabolic surgery needs to be more frequent. It is very promising and helps to reduce the risk of bleeding or leakage and might be a great security test even more in conversion surgeries.

V-64
LAPAROSCOPIC CONVERSION OF SLEEVE GASTRECTOMY TO ROUX-EN-Y GASTRIC BYPASS: LIVER ADHESIOLYSIS AND HIATAL HERNIA REPAIR

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Introduction

Laparoscopic conversion of sleeve gastrectomy to Roux-en-Y gastric bypass is becoming an increasingly common surgical procedure. The possibility of developing sleeve adhesions to the liver bed and the presence of a hiatal hernia pose additional difficulties in revisional surgery.

Clinical case

A 63-year-old woman with history of arterial hypertension, dyslipidemia, and depressive syndrome underwent a laparoscopic sleeve gastrectomy in 2013 because of a BMI of 51 kg/m², presenting a correct postoperative evolution. In 2019, symptoms compatible with gastroesophageal reflux appeared. A small hiatal hernia was detected on gastroscopy. pHmetry revealed moderate acid gastroesophageal reflux, and manometry detected normal esophageal motility. The patient was presented at a multidisciplinary committee, and conversion from sleeve to Roux-en-Y gastric bypass (BMI 34.1 kg/m² at the moment) was decided by minimally invasive approach.

Surgical technique

Insufflation of pneumoperitoneum with Veress and placement of 5 laparoscopic trocars under direct vision. Anti-Trendelenburg position. Exploratory laparoscopy and adhesiolysis of the entire lesser gastric curvature, strongly adhered to the liver bed along the sleeve line. Dissection of the esophageal hiatus opening both pillars and posteriorly suturing hiatal hernia with braided non-absorbable suture. Creation of the gastric reservoir, 8 cm below the esophago-gastric junction, without resizing. Biliary limb count (100 cm), mechanical gastrojejunal anastomosis, and orifice closure with PDS 2/0. Closure of Petersen's space with Prolene 2/0. Alimentary limb count (80 cm), enteroenteric anastomosis, and orifice closure with PDS 2/0. Closure of enteroenteric space with Prolene 2/0. Transection of alimentary and biliopancreatic limbs and indocyanine green and oral methylene blue test. Trocar removal under direct vision. No intraoperative incidents. Proper postoperative evolution, being discharged 48 hours after surgery.

Conclusion

Laparoscopic approach in the field of revisional surgery is a challenge that must be systematized to make it safe and effective. The selection of candidates for revisional surgery should be individualized, and the surgeon should be prepared for the technical difficulties that may arise during surgery.

V-65

LAPAROSCOPIC INCARCERATED HIATUS HERNIA REPAIR WITH GASTRIC SLEEVE FOLLOWING AN EPISODE OF BARIATRIC TOURISM

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Background

Bariatric medical tourism has risen in prominence across the U.K., with low-cost private operations abroad being directly marketed to patients. Sleeve gastrectomy procedures require intensive pre-operative workup and post-operative care. The discontinuity of care involved in medical tourism, and its effect upon trust in the patient-doctor relationship, can put patients at risk.

Objectives

Here we present the issues around bariatric tourism using the case of a laparoscopic mesh repair of an incarcerated obstructed hiatus hernia following a gastric sleeve done abroad.

Methods

We report a 49-year-old patient, with a background of severe obesity and depression, who underwent sleeve gastrectomy and hiatus hernia repair, in Romania (October 2021). After receiving no follow-up care for three months, the patient was first seen in the U.K. in January 2022. She continued to experience vomiting, reflux, and significant weight loss. We provided nutritional support, alongside PPI. In September 2022, the patient presented with abdominal pain and worsening symptoms, at which point the patient was admitted for nutritional support via NJ tube. CT demonstrated a hiatus hernia with obstructing gastric sleeve.

Results

Our procedure began by dividing dense adhesions found around the hiatus. Omental adhesions were taken down, the pars flaccida and phreno-oesophageal ligament were divided. The stomach was mobilised, and a posterior oesophageal window was developed. The proximal sleeve and stomach were incarcerated in the mediastinum. We conducted a full 360-degree dissection and mobilisation of the oesophagus. A Gore Bio A mesh was secured on the hiatus and the gastric fundus pexied to the oesophagus. The patient progressed well post-operatively and can tolerate soft food. She is still experiencing muscular abdominal wall pain and has not managed to return to work. In clinic, she demonstrates low trust in doctors and is fearful of being lost to follow-up.

Conclusion

This case underscores the need for comprehensive non-judgemental patient education, particularly around medical tourism, as well as continuity of care. Safeguards are required to minimise the risks of medical tourism. It is likely that protracted delays in the provision of elective NHS surgical care are contributing to the rise of medical tourism in bariatric surgery.

V-66

LAPAROSCOPIC INSERTION OF MINIMIZER FOR THE TREATMENT OF FAILED ROUX-EN-Y GASTRIC BYPASS

Maher Hussein

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Background

Laparoscopic insertion of minimizer for the treatment of failed roux-en-y gastric bypass.

Objective

Introduction of insertion of minimizer in failed gastric bypass.

Methods

Laparoscopic Gastric Bypass is a Gold Standard Technique for the treatment of Morbid Obesity but associated with 15-20% failure rate.

Results

We report our experience at the American University of Beirut Medical Center of 32 cases of failed Gastric Bypass that was treated successfully with laparoscopic insertion of minimizer on top of gastric bypass with excellent weight loss and decrease in the incidence of dumping.

Conclusion

Laparoscopic insertion of minimizer can be safely used in failed roux-en-y Gastric Bypass failure.

V-67

LAPAROSCOPIC MINI GASTRIC BYPASS**Maher Hussein**

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Background

Single anastomosis bypass is gaining population due to excellent excess weight loss, high rate of cure of diabetes and minor complication with absence of internal hernias.

Objective

Laparoscopic Mini Gastric Bypass is an effective bariatric procedure for morbidly obese patients.

Methods

I represent my experience at the American University of Beirut Medical Center and affiliated hospitals of 102 cases with 80% excess weight loss over 2 years and diabetic cure in 90% of cases with single complication obstruction at the gastrojejunostomy treated by Roux en-Y bypass.

Results

The video shows the steps used in this operation.

Conclusion

Laparoscopic Mini Gastric Bypass is a safe and effective bariatric procedure.

V-68

LAPAROSCOPIC PLICATION OF CANDY CANE FOR INTRACTABLE REFLUX FOLLOWING REVISIONAL ROUX- EN-Y GASTRIC BYPASS

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Introduction

Gastroesophageal reflux (GORD) disease is one of the most common disorders of the oesophagus. Roux-en-Y gastric bypass (RYGB) is an established surgical option for patients with recurrent symptoms. Nevertheless, a group of patients report persistent GORD even after a RYGB despite pharmacological therapy and lifestyle optimisation. In the absence of a hiatus hernia, this is possibly secondary to lower oesophageal sphincter incompetence. There are very limited surgical options including radiofrequency energy (Stretta procedure) or modified Nissen fundoplication utilising the remnant stomach over the RYGB.

Objectives

We present a case of a 64-year-old patient with two previous laparoscopic Nissen's fundoplications with hiatus hernia repair, a single anastomosis gastric bypass and a RYGB who underwent laparoscopic plication of the small bowel candy-cane over the gastro-jejunal (GJ) anastomosis for the management of refractory reflux following revisional RYGB.

Background

At the time of surgery the patient's weight was 69kg and the BMI 26.6kg/m². She had a medical background of hypertension, well controlled on medication. She was reporting occasional dysphagia, regurgitation and retrosternal pain when eating fibrous foods. Oesophageal physiology studies showed absent lower oesophageal sphincter (LOS) pressure and excessive number of reflux episodes transmitted proximally (>15cm above the LOS) (57 episodes, normal <31 episodes in 24h), suggestive of free flow between the stomach and the oesophagus. An upper GI endoscopy showed mild gastritis and normal GJ anastomosis.

Methods

The patient was positioned supine, split-leg, in anti-Trendelenburg position and careful adhesiolysis was performed to release the dense adhesions over the gastric pouch, the anastomosis, the remnant stomach and to expose the hiatus. The small bowel candy-cane was then brought over the pouch to perform an "anterior wrap". Non-absorbable sutures were used to plicate the candy-cane and to secure it in position. A 36-F bougie was used to secure patency of the anastomosis.

Outcomes

The patient was discharged on the first post-operative day after tolerating fluids. To date she reports improvement of the symptoms.

Conclusion

GORD after RYGB leaves very little options for surgery. We report the first case of laparoscopic plication of the candy-cane in an attempt to manage refractory reflux following revisional RYGB.

V-69

LAPAROSCOPIC REDO, NISSEN FUNDOPLICATION TO ROUX-EN-Y GASTRIC BYPASS

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Background

The surgical treatment of gastroesophageal reflux in obese patients is controversial.

Objectives

Show a case of revisional surgery after Nissen fundoplication.

Methods

We present the case of a 50-years-old patient, with no relevant surgical or medical history except type 1 obesity with a 31 BMI. She presented symptoms compatibles with gastroesophageal reflux of several years of evolution. After preoperative study with gastroscopy, gastroduodenal study, 24 hours pH-metry and esophageal manometry a laparoscopic Nissen fundoplication was indicated. The postoperative was uneventful. However, after a few weeks she begins with clinic of progressive dysphagia. An esophagogram was performed and a stenosis with intrathoracic migration of the gastric fundus was observed. Due to the symptoms of the patient and her anthropometric characteristics a scheduled laparoscopic gastric bypass was decided. The intervention includes the reduction of the migrated Nissen and the removal of the associated hernial sac, the section of the fundoplication using a stapler and the realization of the hiatoplasty approximating and closing the diaphragmatic pillars. Once it is done, as long as we have ensured a good passage of the esophagus through the hiatus checked with a Fouche tube, we begin the realization of the gastric bypass creating the gastric pouch. Later we select the jejunal limb that should rise loose and comfortable to the pouch and perform the section of the biliary limb. We measure 150 cm for the alimentary limb and perform the side-to-side jejunum-jejunal mechanical anastomosis, suturing the enterotomy with a bearded suture. An antecolic-antegastric end-to-side gastro-jejunal anastomosis is perform, and the mesenteric gap is closed with a non-absorbable suture.

Results

The patient underwent a satisfactory postoperative course and was discharged on the third postoperative day. Currently she is without reflux symptoms and is losing weight progressively.

Conclusion

The indication of a laparoscopic gastric bypass is feasible and safe and in this patient has a double interest, firstly to control and treat gastroesophageal reflux disease, since the gastric bypass modifies the enteric circuit avoiding acid and bile reflux, and secondly to treat the obesity who in the long term would worsen the clinic of the reflux disease.

V-70

LAPAROSCOPIC REDUCTION OF PETERSEN INTERNAL HERNIA DURING PREGNANCY

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Background

Internal herniation is a difficult diagnosis during pregnancy with possible severe foetal and maternal outcome. Small bowel resections are stated in literature up to 17%, foetal death up to 6%, premature delivery during admission for internal herniation up to 40%. An MRI may be considered to support the diagnosis, with 67% sensitivity and 67% specificity and a positive predictive value of 93% (CI 0.66-0.99). Followed by diagnostic laparoscopy when internal herniation is expected.

Objectives

To discuss a case of internal herniation during pregnancy and provide background knowledge for best care.

Methods

This case shows the decision making and work-up of an expected internal herniation in a 24+3 weeks pregnant patient.

Results

The video presentation shows the reduction of a large Petersen hernia and closing of the mesenteric defect.

Conclusion

Consider performing surgical treatment of expected internal herniation during pregnancy in a viable gestational age after gastric bypass surgery in a centre with neonatal intensive care unit (NICU).

V-71

LAPAROSCOPIC REMOVAL OF INTRAGASTRIC BALLOON FROM DISTAL JEJUNUM

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Background

Balloon treatment of obesity is associated with multiple complications including small bowel obstruction.

Objective

Laparoscopic removal of intra-gastric balloon from distal jejunum.

Methods

The video will show the steps used for the treatment of obstructive intra-gastric balloon in the distal jejunum diagnosed by CT scan of the patient presenting to Emergency Department with evidence of obstruction and abdominal pain.

Results

The balloon was removed by Enterotomy and suturing it with Endo GIA 60mm with white cartilage Escheron.

Conclusion

Patient had smooth post-operative course discharge 4 days after surgery.

V-72
LAPAROSCOPIC REVERSAL OF MODIFIED JEJUNOILEAL BYPASS – VIDEO CASE REPORT

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Background

Jejunioleal bypass (JIB) is a purely malabsorptive operation with serious complications despite the modified procedures. Here we show the complete reversal of modified jejunioleal bypass due to metabolic complications .

Objectives

It's very important to know the best way for immediate and complete remission after complications of these surgeries.

Methods

This video shows a 42 years old woman, who underwent open jejunioleal bypass and cholecystojejunostomy 3 years ago. She presented with weakness, edema, electrolyte abnormality and liver dysfunction. Complete reversal has done and after 4 days, she was discharged.

Results

Ten months after the surgery she has no complaints.

Conclusion

Reversal of the intestinal bypass seems to associated with an immediate, complete, and permanent remission.

V-73

LAPAROSCOPIC REVISION OF GASTRIC PPLICATION TO LAPAROSCOPIC MINI GASTRIC BYPASS

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Background

Laparoscopic Revision of Gastric Plication to Laparoscopic Mini Gastric Bypass.

Objective

Laparoscopic Mini Gastric Bypass as a revisional surgery.

Methods

The video will show the steps used for unfolding of the plication followed by partial gastrectomy and creation of mini bypass 200cm from the ligament of treitz.

Results

All bariatric procedures are associated with failure rate. Laparoscopic Gastric plication as new Bariatric procedure is associated with failure rate up to 30%.

Conclusion

Laparoscopic Mini Gastric Bypass is a safe and effective revisional surgery for failed Laparoscopic Gastric Plication procedure.

V-74
LAPAROSCOPIC SALMON GASTROPLASTY CONVERSION INTO ROUX-EN-Y GASTRIC BYPASS

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Objectives

Revisional bariatric surgery due to complications is usually challenging. The aim of this video is to show tips and tricks for a conversion of a Salmon gastroplasty into Roux-n-Y gastric bypass (RYGB).

Methods

A 57 year old man who was operated in 1999 of Salmon gastroplasty needed several endoscopic dilatations because of dysphagia. Patient also presented reflux, showing grade C esophagitis in upper digestive endoscopic. The preoperative study was completed and conversion into RYGB was scheduled.

Results

Surgery was performed by laparoscopic, needing an extent adhesiolysis. Previous Roux limb was freed. A new gastric pouch was constructed, removing above the gastric ring and the previous vertical lineal mechanical gastroplasty. A new gastro-jejunal anastomosis was done in an antecolic fashion. Pettersen space was closed. A suction drain posterior to gastrojejunal anastomosis was placed. Surgery took 250 minutes. The patient was discharged at fourth postoperative day. Nowadays, two years after surgery, the patient remains asymptomatic.

Conclusions

Salmon vertical gastroplasty is an unused technique. Conversion surgery although could be technically difficult, it is an effective treatment to resolve the reflux and esophagitis produced by Salmon surgery. It is good to know the surgical technique and tips and tricks for its conversion into RYGB.

V-75

LAPAROSCOPIC SLEEVE GASTRECTOMY IN A PATIENT WITH SEVERE HAEMOPHILIA A (CASE REPORT)

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Introduction

Haemophilia A is an X linked inherited bleeding disorder caused by deficiency in coagulation factor VIII (FV III). To prevent spontaneous bleeding in muscles and joints, patients with severe Haemophilia A should receive prophylactic replacement therapy. Dosing shall be adjusted according to body weight.

Case presentation

19 years old male patient who is well known to have Haemophilia A, that has been diagnosed shortly after birth during routine circumcision. The Patient had presented to our clinic with Body Mass Index of 53.9 kg/m². He was counselled for laparoscopic sleeve gastrectomy after failure of many trials to loose weight. He and his father were counselled for procedure pros and cons. Routine preoperative work up had been performed (Full labs, Abdomen Ultrasound, Dietician consultation, Anesthesia consultation, Cardiology consultation). Haematological consultation had been done and consultant opinion was to give prophylactic factor VIII 7500 IU:

- 2 hours prior to surgery;
- 24 hours after surgery;
- 72 hours after surgery.

Extra precaution had been taken in the perioperative period in the form of:

- Careful cannulation;
- IM injections had been avoided completely;
- No Anticoagulats;
- 1:1 Nursing care;
- Careful Handling and positioning;
- Continuous monitoring (planned ICU admission for first 24 hours then HDU admission for 48 hours);
- Senior anesthetist;
- Senior anesthesia technician;
- On table gastroscopy (same session);
- Smooth bouji tube (size 36 fr.);
- Careful haemostasis:
 - Slow Harmonic sealing;
 - Clipping of short gastrics;
 - 1 minute stapler compression (All green);
 - Full stapler line plication and omental patching;
- Maintenance of blood pressure to average range during surgery.

Patient had uneventful postoperative recovery, a part from mild sub conjunctival haemorrhages (Bilateral) that had subsided spontaneously.

Conclusion

Laparoscopic sleeve gastrectomy can be performed smoothly in patients with Haemophilia A with proper perioperative multidisciplinary care management.

Keywords: Sleeve Gastrectomy, Morbid Obesity, Haemophilia A.

V-76

LAPAROSCOPIC SLEEVE GASTRECTOMY WITH CONCOMITANT MORGAGNI HERNIA REPAIR

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Background

Morgagni hernia is a very rare congenital hernia. The retrosternal diaphragmatic defect account for less than 5% of congenital hernias.

Objectives

This is a video presentation about concomitant laparoscopic sleeve gastrectomy with Morgagni hernia repair.

Methods

Contents of the Morgagni hernia was reduced with traction. The hernia sac was excised, and hernia edges were freed for adequate mesh overlap. The mesh was fixed with trans-fascial and intra-corporeal sutures.

Conclusion

Concomitant sleeve gastrectomy with Morgagni hernia repair is both safe and feasible procedure. Short-term follow up, 5 months, showed satisfactory results.

V-77

LAPAROSCOPIC/ENDOSCOPIC SINGLE ANASTOMOSIS DUODENO-ILEOSTOMY (SADI) SIDE-TO-SIDE WITH LINEAR MAGNETIC COMPRESSION ANASTOMOSIS

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A side-to-side duodeno-ileostomy is accomplished using linear magnets covered by titanium, delivered both trans-orally by flexible endoscopy, sequentially, while laparoscopic assistance provide adequate ileum measurements with markings at 250 cm from the ileo-cecal valve. A 47 y.o. female had a previous sleeve gastrectomy (in 2018 = 311 lbs, and BMI of 47.3 kg/m²), with several co-morbidities like Asthma and Degenerative Disk Disease. Subsequently, she had an Abdominoplasty, and 4 years later, is having a second stage procedure (BMI of 31.0 kg/m²), a side-to-side duodeno-ileostomy, uniting the lower first duodenum with the ileum, ante-colic. The delayed compression anastomosis may decrease risks of bleeding and leak, as after 2-4 weeks magnets will pass. Advantages are the reversibility, partial passage in the natural duodenum for possible ERCP if needed due to the bipartition, permits greater absorption of minerals and vitamins, less side effects and possible future conversion to full SADI (Single Anastomosis Duodeno-Ileostomy) or Duodenal Switch.

The whole procedure is normally performed in 30-60 minutes under general anesthesia, and patients are discharged after a stay of less than 24 hours.

This video demonstrates some technical tips like an initial laparoscopy will verify feasibility, and show if the duodenum and ileum have to be freed from adhesions and be mobile for this anastomosis, which needs to be tension free. Also, laparoscopy permits adequate measurements of the ileum which is key, with a reproducible methods (an umbilical tape of 50 cm, repeated 5 times), and medium-large titanium clips are used to mark both mesenteric sides. After dragging the lower magnet from the jejunum to its proper position of 250cm, laparoscopy helps docking with the upper duodenal magnet. Afterwards, the bowel is inspected in a retrograde fashion towards the ligament of Treitz, to eliminate serosal tear and twists. Finally, closing Petersen's defect is best achieved on the left side, viewing the mesenteries of the transverse colon and distal ileum.

V-78

LAPROSCOPIC SLEEVE GASTRECTOMY WITH LIGAMENTUM TERES CARDIOPEXY – TECHNICAL CONSIDERATIONS

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Background

Ligamentum Teres Cardiopexy (LTC) and the surgical techniques in doing it laparoscopically as a part of routinely performed Sleeve Gastrectomy.

Objectives

Reflux post sleeve gastrectomy can be prevented/ controlled by adding a sling (ligamentum teres wrap across GE junction).

Methods

Posterior 360 degree & 270 degree cardiopexy demonstrated.

Results

It prevents/ at least lessens the reflux post operatively with retaining GE junction intra abdominally and thus prevents migration of sleeve.

Conclusion

Performing a LTC routinely During Sleeve gastrectomy can help prevent GERD in the post operative period.

V-79

LARGE DIAPHRAGMATIC HERNIA REPAIR AFTER REVISIONAL ONE ANASTOMOSIS GASTRIC BYPASS

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Background

Diaphragmatic hernia is a common finding in patients undergoing evaluation for metabolic and bariatric surgery (MBS) both pre- and post- operatively. During the long-term follow patients may presents clinical and imaging studies suggesting a development of a diaphragmatic hernia. Rarely this is caused due to inadvertent injury during the operative dissection. In this case we present a video of a patient undergoing a large diaphragmatic hernia repair after revisional One Anastomosis Gastric Bypass (OAGB), most probably caused by iatrogenic injury.

Objectives

Video case presentation of a large diaphragmatic hernia repair caused by iatrogenic injury during OAGB.

Methods

A 49-year-old women presented in the MBS clinic with severe episodes of abdominal pain, chest pain, and dyspnea. Ten months ago the patient underwent revisional OAGB following weight regain after gastric banding and sleeve gastrectomy. On imaging studies, a large diaphragmatic hernia was seen, the contents of the hernia were the gastric pouch, greater omentum, small bowel and transverse colon. The patient was scheduled for surgery.

Results

Surgical procedure is shown in the video. The patients underwent reduction of the hernia content, dissection of the hernial sac, crurrorhapy and mesh placement. Operative and postoperative course were normal.

Conclusion

Large diaphragmatic hernia occurrence during follow-up after MBS is a rare finding and can be caused due to inadvertent injury during MBS. Clinical suspicion and prompt treatment are strongly recommended.

V-80
LATERO-LATERAL DUODENO-ILEOSTOMY + SLEEVE GASTRECTOMY WITH MAGNET SYSTEM- - NOVEL METABOLIC SURGERY PROCEDURE

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Background

Modification of single anastomosis duodeno-ileal bypass and sleeve gastrectomy (SADI-S) by creation of side-to-side duodeno-ileostomy with GT Metabolic Solutions Magnetic Anastomosis System (MAGNET System) warrants partial passing of intestinal contents. This anastomosis permits achieving and maintaining weight loss as well as improving glycemic status in obese patients. The advantages of this procedure are numerous: early stimulation of GLP-1 and PYY 3-36, partial derivation of calories, decreased absorption of fat, main duodenal absorption of minerals and B, C complex vitamins, endoscopic access to duodenum (ERCP) and decrease bile reflux (post-pyloric connection).

Objectives

The aim of this video is to describe the surgical technique of latero-lateral duodeno-ileostomy + sleeve gastrectomy with MAGNET System.

Methods

60 years old female with BMI of 49 kg/m², who had duodeno-ileal anastomosis in April 2022 in Hospital Clinico San Carlos, Madrid.

Results

We start the procedure by checking the ileocecal valve with the aim to assure that it is accessible. At the level of 250 cm from the valve we put two clips on the mesentery to mark the place of anastomosis. First magnet is then positioned by endoscopy in the proximal jejunum, at the level of the Treitz ligament, whilst the clamp prevents the magnet to move forwardly. Laparoscopically, and with the assistance of gastroscope's transillumination, we visualize the 1st magnet that we move throughout jejunum with a specially designed magnetic instrument. Once the first magnet is at the level of 250 cm from the ileocecal valve, the 2nd magnet is positioned endoscopically in the 1st portion of duodenum (post-pyloric placement). We then join two intraluminal magnets and create a duodeno-ileal connection which will be the site of future anastomosis that will be formed in a few weeks. The Peterson's space is closed with resorbable suture. The procedure is then completed with the standard sleeve gastrectomy.

Conclusion

Magnetic Duodeno-Ileostomy is a promising new metabolic surgery technique that is safe, feasible and with encouraging weight loss efficacy.

V-81

LINX REMOVAL AND CONVERSION OF SINGLE ANASTOMOSIS DUODENO-ILEOSTOMY WITH SLEEVE GASTRECTOMY (SADI-S) TO ROUX-EN-Y GASTRIC BYPASS (RYGB)

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Background

De novo acid reflux development after surgery is a potential complication of all bariatric procedures with variable occurrence rates. Gastroesophageal reflux disease (GERD) after single anastomosis duodeno-ileostomy with sleeve gastrectomy (SADI-S) has been described, with multiple management options being available. Amongst these options, surgical Linx device placement on the gastroesophageal junction was shown to be an effective long-term therapy for GERD management. However, severe dysphagia is a potential complication of Linx placement and often requires surgical revision and removal of the device.

Objectives

To portray the efficacy of concurrent Linx removal and conversion of SADI-S to RYGB for the treatment of GERD and severe dysphagia.

Methods

We describe the case of a 78-year old female with a history of sleeve gastrectomy converted to SADI-S due to insufficient weight loss. She later on developed de novo reflux after her surgery which led to a surgical Linx device placement in 2015 at an outside hospital. The patient presented to our institution for revisional bariatric surgery and Linx removal due to severe dysphagia. Pre-operative workup including upper endoscopy control and optimization of her nutritional status was completed with a pre-op albumin > 3.5. No intraoperative or early post-operative complications were noted. The Linx device was carefully removed, and the SADI-S was successfully converted to a RYGB.

Results

The patient reported immediate relief after surgery on postoperative day 1 (POD). She was discharged on POD 3. At her two-week follow-up, she reported complete resolution of her symptoms. No post-operative complications were reported after 3 months of follow-up.

Conclusion

Linx removal and conversion from SADI-S to RYGB is a viable and feasible option for the management of dysphagia and reflux.

V-82
LSG TO LRYGB: THE BEST OPTION FOR GERD AND BARRETT'S ESOPHAGUS POST-LSG

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Background/Introduction

A significant drawback of Laparoscopic Sleeve Gastrectomy (LSG) is the development of or increase in reflux esophagitis. Up to 30% of LSG patients may require revisional surgery at some point for GERD. Several studies have shown that the conversion LSG to Laparoscopic Roux-en-Y gastric bypass (LRYGB) was very effective for GERD, with significant improvement in symptoms.

Objective

To demonstrate the effectiveness of conversion of LSG to LRYGB in patients with GERD and Barrett's Esophagus post-LSG.

Methods

Case presentation and demonstration of surgical technique of LSG to LRYGB with cruroplasty.

Results

36 years old (current age), Female. Presented with inability to eat, excessive nausea, vomiting after meals - repeated episodes since 2019. LSG done in 2007 (Preop Weight/ BMI – 87 Kg/ 38.67 Kg/m²).

OGD Scopy with Endoscopic Achalasia Balloon Dilatation done in 2019:

- Post sleeve gastrectomy, Kink seen 5-6 cm from the GE junction, another kink seen just proximal to the incisura, both kinks dilated with achalasia balloon (130 kPa) and straightened.

OGD Scopy with Endoscopic Achalasia Balloon Dilatation done again in 2023:

- Post sleeve gastrectomy, Grade C esophagitis, Migration of the upper end of the sleeve into the mediastinum, Barrett's esophagus confirmed on histopathology;
- 2 kinks seen in the sleeve stomach, one at the upper 1/3rd and the other at the level of the incisura, both kinks dilated with achalasia balloon (130 kPa) and straightened.

Revisional bariatric surgery – LSG to LRYGB done in January 2023 (Presenting Weight/ BMI – 50.9 Kg/ 22.62 Kg/m²). Postoperative Outcome:

- Improvement in preoperative symptoms of inability to eat, excessive nausea, and vomiting after meals;
- Improvement in Barrett's esophagus changes.

Conclusion

Increasing GERD and changes of Barrett's esophagus is a reality after LSG. Kinking of the stomach sleeve and associated symptoms is a reality after LSG. Revisional bariatric surgery – LSG to RYGB, remains the best option for management of these patients.

V-83

MAGNETIC DUODENO-ILEOSTOMY WITH SWALLOWABLE MAGNET

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Background

The Linear Magnetic Anastomosis System was developed to perform a side-to-side duodeno-ileal anastomosis without enterotomy by combination of flexible endoscopy and laparoscopy. A swallowable magnet was designed to facilitate the first part of the procedure.

Objectives

Study aims were to determine feasibility and safety.

Methods-Technique

Side-to-side MAGDI was performed by swallowing the distal magnet, before the surgical procedure was initiated, allowing natural peristalsis to push this magnet to the proximal jejunum. Then laparoscopy delivered it to the ileum (250 cm from caecum) with a positioning device, followed by endoscopic delivery of a proximal magnet to the first duodenum; magnets were brought together with laparoscopy. Laparoscopy is necessary to: 1) Measure adequately an ileal distance of 250 cm from the ileo-cecal valve, 2) Appose magnets without any tissue interposition (fat, bowel, pancreas, colon, liver), 3) Dissect possible peri-duodenal adhesions, especially in patients with previous cholecystectomy, where the inferior anterior first and second duodenal parts are free, 4) Avoid bowel twisting, and split the greater omentum to allow ante colic passage of the ileum without any tension, and 5) Mesenteric defect (Petersen's), between the transverse mesocolon and mesentery of the ileum, closure with a running non-absorbable suture, to prevent future internal hernia. Patients are discharged less than 24 hours after, with an abdominal X-ray confirming a right upper quadrant magnets position.

Results

In all patients, swallowing was achieved in 100% with positioning in the small bowel before laparoscopy was commenced. Decreased total operating time was noticed. This technique involved only a side to side magnetic anastomosis without supporting sutures and without gastrectomy, aiming for remission of type-2 diabetes in adults. There were no anastomotic leaks, bleeds, infections, or deaths.

Conclusion

Anastomosis using the Linear Magnets to achieve side-to-side Duodeno-Ileostomy bipartition in adults with T2DM, in which the distal magnet had been swallowed before laparoscopy, appeared feasible and safe.

V-84
MALNUTRITION MANAGEMENT AFTER DUODENAL SWITCH: KISSING X ANASTOMOSIS OR ELONGATION OF THE COMMON CHANNEL

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Background

Biliopancreatic diversion with duodenal switch (BPD-DS) is one of the most effective bariatric procedures in terms of weight-loss outcomes and overall comorbidity resolution. In addition, reported complication rates after BPD-DS are typically low when compared to other bariatric procedures. However, a potentially dreadful complication is severe malnutrition which can be managed in multiple ways.

Objectives

To describe two surgical options for malnutrition management after BPD-DS: kissing X anastomosis and elongation of the common channel.

Methods

We firstly describe the case of a 67-year old male with a history of BPD-DS and ulcerative colitis who developed severe malnutrition with a reported BMI of 14 kg/m². He was placed on total parenteral nutrition (TPN) at an outside hospital. When he presented to our institution, he was already off TPN and stabilized for four months. Pre-operative workup including optimization of his nutritional status was completed with a pre-op albumin of 3.6 and pre-albumin of 16. This patient's feeding tube was placed high on the bilio-pancreatic limb and was not tethering the limb, allowing us to perform a kissing X anastomosis. The second patient also had a similar history of BPD-DS complicated by malnutrition and anemia. However, this patient had a good nutritional status at presentation given that he was completely optimized and managed at an outside hospital. His primary concern was to avoid recurrence of a malnutrition episode which led us to propose revisional surgery by elongating his common channel. Limb measurements and closure of a Peterson's defect was performed and detailed for both procedures. No intraoperative or early post-operative complications were noted.

Results

Both patients reported significant improvement after surgery and complete resolution of malnutrition at one-month follow-up. No post-operative complications were reported at 3 months of follow-up for both procedures.

Conclusion

The Kissing X anastomosis or elongation of the common channel both lead to resolution of malnutrition after duodenal switch.

V-85

MANAGEMENT OF A LARGE SUBCARDIAL DIVERTICULUM IN SLEEVE GASTRECTOMY: TECHNICAL TIPS

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Background

Gastric diverticula are uncommon anatomic abnormalities, usually asymptomatic or found incidentally in upper gastrointestinal series or endoscopy. Gastric diverticula usually arise from the posterior wall of the gastric fundus. Their preoperative diagnosis or intraoperative finding is of great importance in patients with obesity scheduled for bariatric surgery.

Objectives

We propose some considerations about technical tips to adopt to perform safely sleeve gastrectomy in presence of a subcardial diverticulum.

Methods

We present the case of a 60-year-old woman, with a body mass index (BMI) of 52, scheduled for sleeve gastrectomy. The preoperative esophagogastroduodenoscopy resulted normal. The upper gastrointestinal series showed an image of saccular pouch of the gastric wall, measured 7 cm in diameter, in the upper fundus of the stomach.

Results

After induction of pneumoperitoneum and insertion of four trocars, gastro-colic ligament was opened with complete greater curvature dissection. Gastric fundus was entirely mobilized and short gastric vessels were sealed. A large diverticulum of the posterior gastric fundus with a wide-based implantation was identified during the greater gastric curvature dissection. The diverticulum was distant 2 cm from the esophago-gastric junction with its neck and very close posteriorly to the pancreas and to the splenic artery. The diverticulum showed a fragile wall, thinner than the normal gastric wall (Fig. 1). Sleeve gastrectomy was completed using a powered flexible stapler. During placement of the stapler the diverticulum was pulled laterally from the staple-line and completely included within the resected specimen. The postoperative course was uneventful and the patient was discharged after three days from surgery. The upper gastrointestinal study on the second postoperative day didn't reveal any leak of gastrografin from the staple-line.

Conclusion

The preoperative diagnosis of a gastric diverticulum with endoscopy or upper gastrointestinal swallow study in a patient scheduled for bariatric surgery is of great importance to plan a safe and correct surgical procedure. Complete dissection of the diverticulum must be careful and accurate. If the diverticulum is subcardial great care must be taken in maintaining a security distance from the esophago-gastric junction and keeping away the diverticulum from the staple-line.



Fig. 1. Gastric specimen.

V-86

MANAGEMENT OF BOWEL PERFORATION DURING ONE ANASTOMOTIC GASTRIC BYPASS

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Background

In this video we showcase a case of 52 years old female with BMI of 56.5 kg/m² who was a known case of diabetes mellitus, hypertension and dyslipidemia who was posted for one anastomotic gastric bypass.

Objectives:

Manage intraoperative bowel perforation.

Methods

Intraoperatively there was a traumatic perforation at mesenteric end of jejunum for which one anastomotic loop configuration had to be converted to long pouch RYGB configuration to excise the perforation.

Results

OAGB converted to long pouch RYGB.

Conclusion

We prefer air leak test in all cases of OAGB and RYGB. It can sometimes prevent major disaster.

V-87

MANAGEMENT OF LEAK AFTER REVISION OF REUX EN Y GASTRIC BYPASS FOR WEIGHT REGAIN BY INTERNAL PIGTAIL DRAINAGE

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Background

Revisional bariatric metabolic surgery (BMS) is often necessary for patients with weight regain or complications after initial surgery. This procedure carries a higher risk of complications, including the development of leaks.

Objective

This multi-media article aims to describe the management of a leak after revision of RYGB for weight regain with internal pigtail drainage after failed Self-expanding metal stents (SEMS) due to migration. The article presents the pre- and post-workup plan and findings and discusses the pros and cons of various treatment options.

Methods

A 40-year-old female patient underwent revision surgery following weight regain after RYGB. Adhesiolysis, gastric pouch, and gastrojejunal anastomosis resizing were conducted, and a drain was placed. One week postoperatively, the patient developed a leak, and a metal stent was subsequently placed. However, the stent migrated, and a double pigtail tube was inserted to drain the fistula.

Results

The patient tolerated the double pigtail tube well and recovered completely. Follow-up imaging did not show any remarkable findings.

Conclusion

Treatment plans for leaks after revisional BMS should be tailored to the patient's individual condition and the underlying cause of the leak. SEMS treatment should not be commonly used after RYGB due to migration risk. Combining a double pigtail stent and external percutaneous drainage may be a safe and effective first-line approach for patients with local sepsis.

MANAGEMENT OF LEAK BY INTRAOPERATIVE MEGASTENT INSERTION DURING REVISIONAL BARIATRIC METABOLIC SURGERY - A CASE REPORT

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Background

Revisional bariatric metabolic surgery (RBMS) is inevitable in a considerable percentage of patients who have undergone bariatric surgery (BS) for weight loss failure or surgery-related complications. The rate of RBMS has increased dramatically over the last decade, doubling from approximately 6% in 2011 to approximately 12% in 2015 in the UK, Europe, and USA. Roux-en-Y gastric bypass (RYGB) is the most common revision procedure for failed sleeve gastrectomy (SG); however, one-anastomosis gastric bypass (OAGB) is also well-reported in the literature. RBMS is inherently more difficult than primary procedures and may be more prone to complications. Leakage is the most common major complication following revision OAGB after restrictive procedures, with a rate of 1.6% according to a recent systematic review, while protein malnutrition is a relatively less common complication occurring in 0.2% of cases.

Objectives

Megastents has proved effective and safe for staple line leaks after SG, with reported success rates up to 90% in treating leaks after SG. Moreover, data from a recent systematic review have shown high rates of effectiveness and safety with an overall leak closure success rate of 85.89% for leaks following SG and RYGB. Currently, there are no clear guidelines or therapeutic insights available for stent placement during or after BS.

Methods

We report a case of restoration of OAGB to SG in a patient with a previous primary SG revised to OAGB due to weight regain. Postoperative complications occurred due to adhesions and edema around the anastomosis caused by the ulcer, which led to technical difficulties in restoration and leak occurrence.

Results

Intraoperative stent placement was performed after the occurrence of complications during relaparoscopy with successful closure of the fistula.

Conclusions

Patient discussion and counseling are of paramount importance, as deviations from the original plan may occur due to intraoperative complications. While endoscopic intervention successfully managed the leak due to stent insertion in this case, different management options can still resolve the leak; therefore, further studies are necessary to define a consensus for the management of complex cases.

V-89

MANAGING OBESITY AFTER LIVER TRANSPLANTATION: A LAPAROSCOPIC SLEEVE GASTRECTOMY CASE STUDY

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Background

Obesity is a common complication after liver transplantation, with significant implications for morbidity and mortality. However, the optimal management of obesity in this population remains unclear. Laparoscopic sleeve gastrectomy has emerged as a potential treatment option, but the procedure can be challenging in post-liver transplant patients due to the presence of adhesions and altered anatomy.

Objective

To present a case report of a 30-year-old female with a BMI of 40 who underwent a laparoscopic sleeve gastrectomy for the management of obesity after liver transplantation, with a focus on the challenges encountered during surgery.

Methods

A retrospective analysis of medical records and intraoperative videos was conducted to evaluate the patient's clinical course and surgical outcomes after laparoscopic sleeve gastrectomy.

Results

The patient achieved a significant reduction in weight and BMI, with a total weight loss of 38.6 kg and a BMI reduction to 28.3 kg/m² at 12 months postoperatively. The surgery was technically challenging due to the presence of adhesions, altered anatomy, and a plastered liver remnant. However, the procedure was completed safely without perioperative complications or adverse events.

Conclusion

Laparoscopic sleeve gastrectomy can be a safe and effective option for managing obesity after liver transplantation in carefully selected patients, but it can be technically challenging due to the altered anatomy and presence of adhesions. Our case report highlights the potential benefits of this approach, including significant weight loss and improved quality of life. Surgeons should be aware of the potential challenges and take appropriate precautions to minimize the risks of the procedure. Further studies are needed to confirm the safety and efficacy of laparoscopic sleeve gastrectomy in this population.

V-90

NAVIGATING THE CHALLENGES OF LAPAROSCOPIC SLEEVE GASTRECTOMY IN A PATIENT WITH SITUS INVERTUS TOTALIS

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Background

Situs Invertus Totalis (SIT) is a rare congenital anomaly characterized by the reversal of thoracic and abdominal organs' normal position. The impact of this condition on surgical procedures is not well understood, especially in bariatric surgery.

Objective

The objective of this study is to present a case report of laparoscopic sleeve gastrectomy (LSG) in a patient with SIT and to highlight the challenges faced during the procedure.

Methods

We present a case of a 40-year-old female with a BMI of 45 who underwent LSG. Preoperative workup, surgical technique, intraoperative challenges, and postoperative management were documented.

Results

The patient underwent LSG successfully. However, the procedure was technically challenging due to the altered anatomy, including liver and spleen locations, as well as reversed bowel loops. The use of preoperative imaging helped to navigate these challenges successfully. The patient had an uneventful postoperative course and achieved significant weight loss at one-year follow-up.

Conclusion

LSG in a patient with SIT is a technically challenging procedure that requires thorough preoperative planning and intraoperative vigilance. The use of preoperative imaging can aid in overcoming the challenges associated with altered anatomy. Despite these challenges, LSG can be safely performed in patients with SIT, with satisfactory outcomes.

V-91

NEW APPROACH FOR THE TREATMENT OF SLEEVE GASTRECTOMY LEAK WITH LAPAROSCOPIC ROUX EN Y BYPASS TO THE LEAK SITE AS ONE STEP PROCEDUREMaher Hussein*American University of Beirut Medical Center, Dept. Surgery, Beirut, Lebanon***Background**

Leak is one of the common complications of laparoscopic sleeve gastrectomy that result prolongation of hospital stay, morbidity and even mortality.

Objective

One step procedure for the treatment of sleeve leak.

Methods

I report new approach for the treatment of 51 leaks presented to me post laparoscopic sleeve gastrectomy with laparoscopic Roux En Y bypass to the leak site at the level of gastroesophageal area. Only 2 mortality, one was due to sepsis due to delayed surgery and one bleeding post removal of chest tube after surgery. This new approach is possible and feasible, and avoids stenting due to high failure rate, prolonged hospitalization and saves life of patients

Results

All leaks healed 7 days from surgery due to well vascularized small intestinal mucosa to mucosa anastomosis, except for 3 leaks that healed after 2 weeks of conservative treatment.

Conclusion

This new approach is successful in 96% of patients with reducing hospital stay up to 7-10 days.

V-92

NEW SURGICAL TREATMENT FOR STAPLE LINE LEAKS IN SLEEVE OR GASTRIC BYPASS PROCEDURE

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Background

Sleeve gastrectomy fistulas are difficult to treat and surgical options are usually aggressive and endoscopic treatment is time consuming. Here we present a treatment option for fistulas with low cost, less suffering for the patient and low complexity.

Objectives

Present a new surgical treatment for leaks after bariatric surgery , in the immediate post-op.

Methods

Surgical treatment for acute Sleeve Gastrectomy fistula using the small intestine (jejunum loop) as the ideal tissue for blocking the leak and facilitating the healing of the leak area, without the use of stents or orogastric tube and avoiding the progression of abdominal sepsis.

Results

With the completion of the procedure, there was complete blockage of the leak with total improvement of the septic condition, early feeding, possibility of complementing antibiotic therapy at an outpatient level and early discharge.

Conclusions

The method of suturing the small intestine wall around the leakage area in gastrectomies (patch) can be offered as a new option for the surgical treatment of this recent postoperative complication, as it is effective in blocking leakage in the compromised area, leading to a rapid healing of the diseased area and prompt recovery of the patient.

V-93

NISSEN FUNDOPLICATION TO ROUX-EN-Y GASTRIC BYPASS

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Background

Gastroesophageal reflux disease (GERD) and hiatal hernia is more common in obese people in about 30%. While Nissen Fundoplication is the treatment of choice for individuals with hiatal hernia and GERD refractory to medical treatment. While Roux-en-Y Gastric Bypass (RYGB) is effective option to treat both severe obesity and GERD.

Methods

We present the case of 53-year-old female with a BMI 49 who underwent Laparoscopic Nissen Fundoplication 2 years back for hiatal hernia and GERD. Post operative period passed uneventfully despite GERD symptoms not improved and still on regular proton pump inhibitor. Barium swallow revealed GERD and recurrent hiatal hernia. Upper GI Endoscopy revealed 2 cm hiatal hernia with reflux esophagitis. We decided to convert the Nissen Fundoplication to Laparoscopic Roux-en-Y Gastric Bypass (LRYGB).

Results

Laparoscopic exploration started with identification of anatomy of the previous Nissen Fundoplication. Meticulous lysis of adhesions using monopolar cautery, laparoscopic scissors and vessel sealing device. Dissection continued toward right crus of diaphragm and separation of the previous wrap and hiatal region from right to left up to complete release of previous fundal wrap. Followed with hiatal repair. Short gastric pouch performed, and fundal resection done. We perform RYGB with Bowel measurements of 100 cm biliopancreatic limb and 100 cm alimentary limb.

Conclusion

Laparoscopic RGYB is a good option for obese patient with GERD. Laparoscopic RYGB in obese patient with previous Nissen Fundoplication is a technically difficult with longer operative time, but it can be performed safely and effectively.

V-94
NON-CONFORMING ROUX-EN-Y GASTRIC BY-PASS (RYGBP): ROBOTIC SURGICAL REDO

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Case Observation
Material and method

A 44 Y Old lady, complaining of GERD and regain weight after a By-Pass (2017).

History

Umbilical hernia, C-section (Pfannenstiel). Lap band 2010. Height 166 cm, Maximum weight 128 Kg, BMI 46,5. Min weight after By-pass 80Kg, actual 92 in progression. No operative record. Barium esophagography: pouch dilatation. PH-metry: negative.

Surgery (Robotic Da VINCI X device)

Adhesions, redundant afferent limb of 20 cm length, dilated pouch, short biliary limb of 30 cm, redundant blind limb of 15 cm. Pouch reduction (bougie 36 French). Total resection of the RY-GBP:

- Resection of the gastro-jejunal anastomosis;
- Gastrojejunal anastomosis with the afferent limb, gaining of 20 cm length;
- Splitting the distal part of the alimentary limb from next to the jejune-jejunal anastomosis;
- Jejuna-jejunal anastomosis with latera-terminal with the blind biliary limb, with gaining of 15 cm length on the biliary limb. The total new alimentary limb's length is about 135 cm.

Follow-up

2 days hospital stay. 1 month: 88 Kg, no GERD. Smooth.

Conclusion

Bariatric surgery can be complex and difficult. Weight loss failure, regain or adverse events like GERD, can simply reflect a surgical default. In some cases, surgical exploration can be the ultimate solution to detect anomaly. Robotic use enhances the surgical feasibility. Operative record must be given to the patient upon hospital's discharge.

V-95

NOVEL TECHNIQUE TO MANAGE CHRONIC SLEEVE LEAK

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Background

There are two strategies to manage chronic leakage with distal stricture for more than 3 months after failure of trials of stenting and double pig tails; namely, total gastrectomy and esophago-jujnostomy; fistula-jujnostomy (Baltazar technique). A new technique; resection of the fistula and conversion to Roux-en-Y gastric bypass will be presented in the present work.

Objectives

To present a new salvage procedure in condition that the pouch is voluminous and it could be resized with excision of the fistula without jeopardizing the pouch configuration.

Methods

The operative steps was as follows:

- Exploration of the abdomen;
- Dissection of omentum then exposure of the double pig tail;
- Complete exploration of the hiatus and mobilization of the lower esophagus;
- Identification of the site of the chronic leakage;
- The pouch was found to be voluminous so, resection of the fistula with cuff of gastric pouch;
- Completion of RYGB as usual.

Results

Postoperative CT volumetry results:

- Post-sleeve gastric pouch volume of about 122 ml;
- No collections or contrast leakage.

Conclusion

In patients refusing bypass surgery, we suggest converting to Sleeve Gastrectomy as a salvage procedure that may prevent undesirable weight regain with the total reversal. We recommend collecting feedback from Bariatric Surgeons regarding this technique. Long-term outcomes should be considered in further large-scale studies.

V-96
ONE TIME MAY NOT BE ENOUGH: REVISIONAL GASTRIC BYPASS

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Background

Although RYGB remains the gold-standard bariatric surgery a small but significant number of patients might regain up to 50% of the total weight lost. Given the nature of the original procedure, several methods of increasing weight loss have been described.

Objectives and Methods

RYGB is a mixed metabolic procedure with a restrictive component (through the formation of a small gastric pouch), a biliopancreatic shunt (gastro-jejunal anastomosis) and an hypoabsorptive component (jejuno-jejunal anastomosis). The length of the limbs used varies according to the surgeon's preference and is usually between 50 and 150 cm, for each of the alimentary and biliopancreatic limbs.

Results

We present the case of a patient submitted to laparoscopic gastric bypass 5 years earlier. After surgery, the patient reached a maximum total weight loss of 35% but subsequently regained 50% of the TWL. Despite optimized conservative treatment, intensive nutritional counselling and adjuvant weight loss medication the patient kept her weight stabilized, without further weight loss. For this reason, we proposed surgical revision with a laparoscopic type 2 distalization of RYGB.

Conclusions

We present a video that illustrates this surgical technique, measuring total intestinal length (and comparing to previous operative notes) and elongating the biliopancreatic limb. The post-operative was uneventful and the patient was discharged on POD 2.

V-97

PARTIAL SLEEVE GASTRECTOMY FOR MANAGING WRAP NECROSIS FOLLOWING NISSEN'S FUNDOPLICATIONMahak Bhandari - Athanasios Pantelis - Nirupam Sinha - Winnie Mathur - Mohit Bhandari*Mohak Bariatric and Robotic Surgery Center, Indore, India***Introduction**

The stomach has a rich blood supply and gastric necrosis after upper gastrointestinal surgery is a rare occurrence with potentially detrimental consequences.

Methods

A 43-year-old male underwent Nissen's fundoplication without dissection of the short gastric vessels in our facility in February 2023 due to GERD not responding to optimal medical management. The patient had an uneventful postoperative course and resumed liquid diet on POD1. He remained asymptomatic until 48 days postoperatively, when he presented to the emergency department complaining of epigastric pain and vomiting, soon after resuming solid diet. Laboratory tests, including amylase and lipase, were normal. Plain abdominal x-ray did not reveal evidence of free air sub-diaphragmatically indicative of hollow viscus perforation, or air-fluid levels compatible with bowel obstruction. An attempt for upper GI endoscopy under sedation was laborious and was aborted due to patient intolerance. We made the decision to perform exploratory laparoscopy for diagnosis and further management.

Results

Upon laparoscopy, profound dilatation of the stomach and the fundal wrap were noted, along with serosanguinous free fluid and necrosis along the greater curvature, particularly towards the fundus. The findings were attributed to a combination of remarked gastric dilatation (aggravated after air insufflation during endoscopic attempts) and excessive dissection of the lesser curvature along the left gastric-right gastric artery axis, which led to intussusception of the arterial stalk underneath the wrap and compromise of the blood supply to the stomach. To manage this extremely rare complication and assess the full extent of gastric wall necrosis, we decompressed the stomach through gastrotomy and unwrapped the gastric fundus. Then, we proceeded to intraoperative endoscopy, which revealed transmural necrosis only confined along the cranial portion of the greater curvature. Accordingly, we performed a loose partial sleeve gastrectomy to remove the affected part of the stomach and simultaneously avoid relapse of GERD symptoms in the future. The patient had an uneventful postoperative course and was discharged on POD 10, after adequate resuscitation and return to oral intake.

Conclusions

Thinking outside the box, sleeve gastrectomy may serve as an option for tackling complications after upper GI surgery.

V-98
POST ROUX-EN-Y GASTRIC BYPASS CHRONIC ABDOMINAL PAIN WITH MULTIPLE INTRA-OPERATIVE CAUSES DISCOVERED: VIDEO CASE REPORT

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Background/Introduction

Post Roux-En-Y gastric Bypass (RYGB) abdominal pain can be caused by a diversity of reasons. This complication is under reported and sometimes hard to diagnose. We present a video case in which we have found four causes of pain intraoperatively despite normal initial investigations, and the surgical management.

Objectives

We report possible causes of chronic abdominal pain post RYGB which could be missed during work-up, and its management.

Methods

Data of the case of post RYGB chronic abdominal pain were collected retrospectively and reported in a video with its intra-operative findings and its concomitant management.

Results

49 years old lady who had a RYGB in 2011 with a biliopancreatic limb of 60 cm and alimentary limb of 120cm. Initial BMI on the day of surgery was 43.2kg/m² and her current BMI is 32kg/m². She has had regular follow up in after surgery. Two years ago, her left upper quadrant and central abdominal pain, became intolerable. The pain was colicky in nature associated with bloating and aggravated by eating. She denied any symptoms of reflux or diarrhea but has always complained of some dyspepsia. Endoscopy was normal apart from 5 cm hockey stick. Gastrografin studies and CT abdomen with oral and I.V contrast revealed no clear abnormalities. A diagnostic laparoscopy was performed. The findings were: a 6cm candy cane at the gastrojejunostomy, amputated. A 5cm blind end at the jejunojejunostomy, resected. Wide open Peterson's and a small mesenteric defect at the jejunojejunostomy were present with no internal herniation, both defects were closed. In addition, 2cm abdominal wall defect containing omentum was found, reduced and primarily closed. Recovery was uneventful recovery, and she was discharged home on post-operative day 1. She was followed up in the clinic 4 months later and her abdominal pains have resolved.

Conclusion

Post Roux-en-Y gastric bypass chronic abdominal pain might be difficult to diagnose. We believe the surgical technique at the primary surgery plays a role in prevention of such causes. Diagnostic laparoscopy should be considered especially if investigations show no abnormalities.

V-99

RARE BUT SERIOUS COMPLICATION AFTER OAGB

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Background

Dilated excluded stomach obstruction is a rare complication after Mini-Gastric Bypass operation (MGB), and the management has no international guidelines. Close postoperative follow-up of the patient can pick up such complications. Vague epigastric pain referred to the left shoulder may be the presenting symptom of such a condition. Being a rare complication, but it may lead to stapler line leakage if miss-diagnosed.

Objectives

To level up the suspicion level for dilated stomach obstruction after Mini-Gastric Bypass.

Methods

We present a 34-year-old woman with a BMI of 55 kg/m² who underwent a laparoscopic MGB in February 2022. Two months later, she presented with mild, dull epigastric pain referred to the left shoulder. There was no fever or tachycardia but a distended upper abdomen with mild tenderness. Abdominal ultrasound reported a distended stomach with clear fluid without intraperitoneal collections. CT scan of the abdomen revealed an intra-peritoneal cystic lesion clear in nature, compromising the adjacent bowel loops, with no free intra-peritoneal collection, and its volume is about 3000 cc. The differential diagnosis is kinked gastro-jejunostomy, duodenal obstruction, and twisted or stenosed gastric remnant at the site of the first transverse reload. Laparoscopic exploration showed intact gastrojejunostomy collapsed biliopancreatic limb and dilated remnant stomach due to a twist stenosed part at the site of the first transverse reload. Distal gastrectomy was done after excluding distal obstruction by intra-operative endoscopy.

Results

Postoperative CT volumetry showed:

- Free passage of oral contrast through the gastro-jejunal anastomosis into the alimentary limb;
- No evidence of excluded stomach dilatation;
- No gross perigastric collection nor hematoma.

Clinically, during 72 hours postoperatively, there was no epigastric pain, tenderness, or postoperative complications.

Conclusion

Although dilated excluded stomach obstruction is a rare complication after MGB, it should be considered especially during the first week postoperatively when patient complains of dull epigastric pain referred to left shoulder with distended upper abdomen without fever or vomiting. Abdominal ultrasound with complementary CT volumetry is recommended for those patients.

V-100
REAL ROBOTIC 3 ARMS SLEEVE GASTRECTOMY

Beniamino Pascotto - Lucia González - Virginie Poulain - Alessia Fassari - Ayse Bozok - Martine Goergen - Juan Santiago Azagra

Centre Hospitalier De Luxembourg

Objective

The video describes the surgical technique of a real robotic 3 arms sleeve gastrectomy.

Material and Methods

Audiovisual material obtained from our center with the consent of patients.

Results

Three ports sleeve gastrectomy is a standardized technique in our center for both laparoscopic and robotic surgery. During preoperative, patients follow a low-calorie yogurt diet to decrease hepatomegaly. If the liver is of an adequate size, with a single gauze placed under the left hepatic lobe, sleeve gastrectomy can be performed without any other assistance. In case of hepatomegaly we perform the liver retraction using a barbed thread of 30 or 45 cm. It is fixed with a first point to the diaphragm on the left of the falciform ligament, with a second point in the higher part of the right crura and then again to the diaphragm on the right of the falciform ligament so that it retracts the liver doing a “V” sharing the tension between the two sticks of the “V”. By not using an assistant grasper to separate the epiploon we decreased the “traction-contraction” of two different hands with the risk that may lead to bleeding of short vessels. Patients begin oral tolerance on the day of the intervention and are discharged on the first postoperative day if oral tolerance is adequate and blood tests are normal (CRP less than 80 and less than 18,000 leukocytes).

Conclusions

Real Robotic 3 arms sleeve gastrectomy is a safe and efficient technique. It does not increase surgical time or hospital stay.

V-101**REAL ROBOTIC ROUX-EN-Y GASTRIC BYPASS**

Beniamino Pascotto - Lucia González - Virginie Poulain - Alessia Fassari - Ayse Bozok - Martine Goergen - Juan Santiago Azagra

Centre Hospitalier De Luxembourg

Objective

The aim of this video is to show the standardized step by step technique of Roux-en-Y Gastric Bypass by robotic approach.

Material and Methods

Audiovisual material obtained from our center with the consent of patients.

Results

The video shows the case of a 25 years old woman with blood hypertension and morbid obesity with a BMI of 42 kg/m². After multidisciplinary discussion we decided to perform a Roux-en-Y gastric bypass by full robotic approach. The video is a step by step demonstration of the technique. The patient enters a Fast-Track program like all our bariatric and metabolic patients without selection. The protocol consists in starting liquids intake and mobilization on the day of the surgery and food intake and discharge on the first postoperative day after a clinical and biological check.

Conclusions

Real robotic approach is safe, effective and reproducible. Through a standardized technique, it may overcome some of the technical difficulties of laparoscopy.

V-102
REAL ROBOTIC SASI (SINGLE ANASTOMOSIS SLEEVE ILEAL)

Beniamino Pascotto - Lucia González - Virginie Poulain - Alessia Fassari - Ayse Bozok - Martine Goergen - Juan Santiago Azagra

Centre Hospitalier De Luxembourg

Objective

The video describes the surgical technique of a real robotic SASI (Single Anastomosis Sleeve Ileal).

Material and Methods

Audiovisual material obtained from our center with the consent of patients.

Results

The patient is a 34-year-old woman with morbid obesity (BMI 50 kg*/m²). The first step of surgery is to identify the ileocecal junction from which we measure 3m of ileum. This loop is fixed to the stomach at 3 cm from the pylorus. Next step consists in performing a sleeve gastrectomy calibrated with a Faucher tube of 42 Fr. Finally, a latero-lateral sleeve-ileal anastomosis is performed at the level of the gastric antrum. This is an hand sewn anastomosis with a posterior and anterior layer of 3/0 barbed suture. This way an omega loop is configured preserving the gastroduodenal continuity keeping the access to the bile duct in case of need. The patient enters a Fast-Track program like all our bariatric and metabolic patients without selection. The protocol consists in starting liquids intake and mobilization on the day of the surgery and food intake and discharge on the first postoperative day.

Conclusions

Sasi is a very useful surgical technique since it is a malabsorptive technique especially to consider in patients with BMI higher than 50kg*/m² and also allows to access to the bile duct if necessary. It is a very good option especially for young patients.

V-103

RECURRENT DIAPHRAGMATIC HERNIA POST LAP. RY GASTRIC BYPASS; A MATTER OF DEBATE LEADING TO LOT OF MORBIDITIES

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Reflux esophagitis symptoms are not uncommon after hypo-absorptive techniques either the classic Roux en Y gastric Bypass (RYGB) or the one anastomosis procedure (OAGB). Hiatal Hernia (HH) which is most probably associated reason either to be missed at the preoperative work up or neglected or badly corrected during the planned bariatric surgery. Laparoscopic Anti reflux procedure which is functionally different than Antiacid procedure must be considered if GERD with or without hiatal hernia detected.

This Abstract has an oral & Video presentation which focus on:

- Collective Data about reflux esophagitis after Hypo absorptive bariatric surgeries (especially RYGB).
- Video for Laparoscopic Fundoplication / Wrapping techniques with RYGB to treat GERD with Morbid obesity.
- Video for Recurrent Hiatal hernia and intractable GERD after RYGB.
- Video for Hazards of neglected Hiatal Hernia after bariatric surgery (pleural injury & repair for adherent pulled up stomach).

Conclusion

The fact that hypo absorptive bariatric surgery can treat rather than relieve GERD or Hiatal hernia is not accurate. Recurrence rate of GERD symptoms or Hiatal hernia even after RYGB is counted to be high and reported with the best hand surgeons. RYGB is not an alternative to antireflux surgery in treating GERD with obesity.

V-104
REDO ROUX-EN-Y GASTRIC BYPASS FOR ATYPICAL CHRONIC PAIN – TWISTED CONSTRUCTION

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Background

A substantial proportion of patients experience chronic abdominal pain and symptoms after Roux-en-Y gastric bypass. The etiology of long-term chronic abdominal pain post-RYGB is diverse. Often an etiology is identified using standard diagnostic modalities including computed tomography (CT), endoscopy, and upper gastrointestinal (GI) series. In patients without an identifiable cause a diagnostic laparoscopy should be considered.

Objectives

A 36- years old patient underwent a Roux-en-Y gastric bypass and cholecystectomy in another hospital 6 years ago with good weight evolution. In the last year the patient started to feel sharp abdominal pain, mainly after the meals, sometimes associated with nausea. The abdominal pain disappeared spontaneously about 30 min after the meal. Upper GI endoscopy was normal. CT scan showed no signs of obstruction or internal herniation. There was normal passage of contrast through the gastroenterostomy at the upper GI-series. An explorative laparoscopy was performed. During the procedure a Roux-en-y construction was seen with candy cane on the right side of the gastroenterostomy, passage of the biliary limb through the Petersen's space with a 180° twisting of the alimentary limb and its mesentery.

Methods

After discussion with the patient, a conversion to a classic Roux-en-Y construction was perform. The pouch was transected proximal to the gastroenterostomy. Adhesiolysis of the enteroenterostomy with release of the torsion was performed. The biliary limb was transected proximal to the enteroenterostomy. A new gastroenterostomy was constructed with the use of a circular stapler and a new enteroenterostomy was performed with a linear stapler. Finally the mesogap of the enteroentrostomy and Petersen's space were closed with a non-absorbable barbed suture.

Result

No postoperative complications were observed. There was a complete resolution of the abdominal pain after surgery. The patient was seen until follow up of 6 months.

Conclusion

Chronic abdominal pain after Roux-en-Y gastric bypass should be thoroughly investigated and threatened. Chronic pain could be caused by a 180° twist of the alimentary limb and its mesenteric root with an aberrant construction of the gastroenteostomy.

V-105

RE-DO SURGERY: RE-SLEEVE AND CONVERSION TO LAPAROSCOPIC DUODENAL SWITCH

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Background

Revisional bariatric surgery (RBS) is considered one of the most effective treatments to the cases of insufficient weight loss, weight regain or surgical complications. We perform a second surgical technique, the most of cases an hypoabsorptive one, to solve the problems and achieve the metabolic goals.

After a sleeve gastrectomy (SG), we should consider, for example, laparoscopic duodenal switch (DS). In cases in which dilatation of the gastric fundus is observed, a re-sleeve can be associated to improve the restrictive component. However, there is not much scientific evidence in this regard, yet.

Objective

Presenting a clinical case of RBS with re-sleeve and laparoscopic DS.

Methods

A 36-year-old patient with a history of arterial hypertension and SG performed in 2017, is referred to our unit to consider an RBS due to weight regain. Her pre-surgical BMI was 56 kg/m² and decreased to 40'2 kg/m² 12 months post-surgery, the current one was 44'9 kg/m². She explained gastroesophageal reflux disease (GERD) and regurgitations. The esophago-gastro-duodenal transit (EGDT) showed dilatation of the gastric sleeve. We proposed her an RBS with re-sleeve and laparoscopic DS. Tutored re-sleeve was performed with conversion to laparoscopic DS. We checked the tightness of the anastomosis with methylene blue and we closed the mesenteric and Petersen's defects. The patient was discharged with a good oral tolerance and no evidence of surgical complications.

Results

DS by laparoscopic approach is a safe technique that should be considered in RBS. In cases we observe weight regain, ERGE and regurgitaciones associated with dilatacion of the gastric sleeve we could consider re-sleeve.

Conclusions

We can conclude that RBS could help us to achieve the goals of the bariatric and metabolic surgery and improve the quality of life of our patients.

V-106

REDO THE GASTROILEAL ANASTOMOSIS BECAUSE OF THE TREITZ LIGAMENT ON RIGHT ABDOMINAL SIDE

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Background

Case report: Patient male, 28 years old, weight 118 kg, height 1.74 m, BMI 39.0 kg/m², fasting blood glucose (FBG) 7.14. Dignosis: Obesity, Type 2 diabetes mellitus, Hypertension, Fatty liver, Metabolic syndrome.

Objective

Selection of surgical methods: Single-Anastomosis Sleeve Ileal (SASI).

Methods

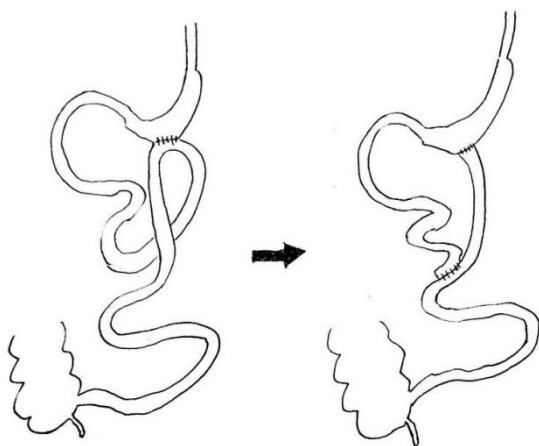
Operative process: 1st step: We do a sleeve gastrectomy. The left crus of the diaphragm must be systematically visualized. Angle of His should be exposed routinely. We mark the 6 cm start point of staple line. Size 36-Fr tube is inserted to the antrum after firing of first staple. 2nd step: We do the gastroileal anastomosis and locate ileal anastomosis position 280 cm from the ileocecal region. We do a manual gastroileal anastomosis with size of 3 cm. After finishing the anastomosis we found vovulus in proximal intestine, which might be prone to internal hernia. We suspect we reversed the proximal and distal sides of the small intestine. Finally, we decided to open the anastomosis and to explore the whole small intestine. The direction of this patient's Treitz ligment is completely to the right. We do a new manual gastroileal anastomosis in proximal intestine next to the incision. The Peterson defect was closed. Enteroenteric anastomosis is performed between the distal intestine and the intestine 25cm below.

Results

The Upper GI tract X-ray POD 2 is normal. Follow up 1 year after operation: Weight loss: 46kg, %EBMIL: 108.7%, Type 2 DM: Complete remission, Hypertension: Complete remission, Fatty liver: Complete remission.

Conclusion

1. We shloud count the whole length of intestine when we want to do GI anastomosis in Transit-Bipartition operations, to ensure the location and the orientation of the intestine; 2. If the Treitz ligament's location is to right side, we should do RYTB rather than SASI, and meantime we should close the Pterson defect so as to avoid the post-operative hernia.



V-107

REMOVAL OF A SUBCARDIAL LEIOMYOMA DURING A LAPAROSCOPIC GASTRIC BY PASS

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Introduction

This is a 44-year-old patient with morbid obesity without co-morbidity associated with surgical indication. Preoperative finding of an asymptomatic subcardial lesion of the 22 mm at submucosa. Histological diagnosis of benign leiomyoma on echo-endoscopic biopsy was done. After multidisciplinary discussion, a surgical enucleation associated with single-stage bypass is proposed.

Methods

Surgical installation legs apart, operator on the right side of the patient and assistant between the legs, with 5 trocars, three of 5 mm, one of 12 mm and one of 10 mm. We performed an enucleation of the right subcardial leiomyoma without breach of the mucosa. After sero-muscular suture and verification by a methylene blue test, we performed a gastric by-pass with mechanical jéjuno-jejunal anastomosis and hand-sewn gastro-jejunal anastomosis. No intraoperative complication were recorded.

Results

Simple postoperative course authorizing refeeding on the first day PO and discharge at the second postoperative day. Definitive anatomo-pathological examination revealed a benign leiomyoma with complete resection. Follow-up at 6 months with good food tolerance, loss of 27kg, TWL 25% and EWL 66%.

Discussion/Conclusion

This case is to our knowledge the first documented example of enucleation and bypass in surgical time. This procedure seems safe, effective in terms of the quality of the margin of resection and impact on weight loss.

V-108
REPAIR OF GASTRIC POUCH LEAK AND DRAINAGE OF SUBDIAPHRAGMATIC ABSCESS

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Background

Leaks constitute the most severe short-term complication and the main cause of mortality in the immediate postoperative period following laparoscopic Roux-en-Y gastric bypass (RYGB). The average time for symptoms of a leak to present is approximately 3 days after surgery. Studies show that the mortality rate of patients with symptomatic leaks requiring reintervention is approximately 10%. In laparoscopic RYGB, leaks occur in approximately 5% of patients, with 50% of radiological leaks showing no clinical expression, thus, 2-2.5% of these patients present with symptomatic leaks. 10% of leaks have been found to occur from the gastric pouch. Dissection of the angle of Hiss constitutes a particularly complex step in construction of the gastric pouch which increases the risk of iatrogenic injuries closer to this area. Leaks are also hypothesized to occur due to technical factors including blood supply, tissue ischemia, and tissue thickness.

Objectives

To demonstrate surgical management of gastric pouch leak post laparoscopic RYGB.

Methods

Case presentation and demonstration of surgical technique for repair of leak from gastric pouch in the immediate postoperative period.

Results

Brief History and Clinical Details:

- 24 years old, Male.
- Laparoscopic RYGB done in February 2023.
- Pre-operative Weight/BMI – 122.2 Kg/ 35.32 Kg/m².
- Comorbidities – GERD, Sleep Apnea, Hyperlipidemia.
- Patient presented with a leak from the gastric pouch, just below the gastroesophageal junction, 4 days postop.
- C/O – Fever spikes, nausea and sensation of hold up, but no episodes of vomiting.
- Hb – 9.9 g/dL, TLC – 14.64/uL.
- Gastrograffin study done showed e/o leak from the gastric pouch just below gastroesophageal junction.
- CT scan abdomen and pelvis - Status post Roux-en-Y gastric bypass (bariatric surgery) and side-to-side jejuno-jejunal anastomosis. CT revealed gastric pouch which persistently retains contrast on the delayed images, from which a short contrast filled tract with a speck or air emanates and terminates in the left subphrenic-perisplenic location. Mild left pleural effusion.
- Surgery – Diagnostic Laparoscopy, with repair of gastric pouch leak and drainage of sub diaphragmatic abscess.

Conclusion

A leak should be suspected and investigated in any patient with persistent tachycardia, dyspnea, fever, and abdominal pain. Leaks can be managed well surgically if picked up immediately postoperatively.

V-109

RESECT ALL STAPLE LINES: A TECHNIQUE FOR SAFE REVISION OF ROUX-EN-Y GASTRIC BYPASSJoseph Greene*Holy Cross Germantown Hospital, Dept of Surgery, Germantown, Maryland, United States***Background**

Gastrogastric fistula (GGF) is a rare long-term complication after Roux-en-Y gastric bypass (RYGB) for morbid obesity. Often associated with gastric pouch or gastrojejunal marginal ulceration, GGF may result in abdominal pain, weight regain, and reemergence of obesity related comorbidities. RYGB revision to treat GGF is a complex operation, with a statistically high complication rate.

Objectives

I present the case of a 69-year-old female presenting with GGF 14 years status post RYGB. I describe a technique focused on resecting all staple lines of the prior RYGB, ensuring that no devascularized stomach or small bowel remains during the reconstruction of the gastric bypass, thereby lowering the risk of postoperative leak.

Methods

The technique presented here represents an evolution of that previously described by Szomstein and Rosenthal. Utilizing their safe entry into the lesser sac, the fundus is liberated from the left crus of the diaphragm and the antrum is divided. I propose a further dissection centered on identifying and resecting all staple lines from the initial RYGB.

Results

The operation begins by dividing the proximal Roux limb and its blood supply, which allows for its ischemia to demarcate the location of the gastrojejunal anastomosis. Once the fundus and body are separated from the antrum, a perigastric dissection proximal to the now identified gastrojejunal anastomosis is performed. Transverse stapling from this point separates the distal gastric pouch and staple lines of the gastrojejunal anastomosis. A bougie is placed along the lesser curve and vertical stapling towards the angle of His excludes the lateral staple lines of the original gastric bypass pouch. With a new pouch created free from any staple lines of the original gastric bypass operation, the gastrojejunal anastomosis, proximal Roux limb, and remnant fundus with body are resected en-block with all staple lines of the original gastric bypass. A new gastrojejunal anastomosis is now sewn.

Conclusion

RYGB revision for GGF can be safely performed by adhering to the principle of resecting all prior staple lines to ensure that no devascularized stomach or small bowel remains during the reconstruction of the gastric bypass, thereby lowering the risk of postoperative leak.

V-110
RESECTION OF GASTRIC FISTULA AND CONVERSION TO RYGB FOR GASTROPLEURAL FISTULA AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY

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Background

There are some rare complications after laparoscopic sleeve gastrectomy (LSG), which it's better for surgeons to know what they are and how to manage and treatment them.

Objectives

In this multimedia, we want to present a case of gastropleural fistula presented to our center and her course of management to the final treatment of converting to RYGB.

Methods

A 28-year-old female who presented two months after LSG (initial BMI of 41.5 kg/m²) with recurrent coughing and fever and diagnosed with pneumonia in another center and treated with antibiotics. Due to not improving, a gastropleural fistula with pulmonary abscess were found in thoracoabdominal CT scan. The abscess was treated with antibiotics and thoracostomy with chest tube. The fistula was visualized with upper endoscopy and a stent was embedded. Due to continuing of food residue in the chest tube and hemoptysis, the patient was a candidate for fistula tract resection and a possible conversion to RYGB. The main surgical steps were: adhesion band release until the fistula become visible, finding the subdiaphragmatic abscess and the fistula tract from the fundus of the resected stomach through the diaphragm, releasing the fistula, finding the leak point that caused the problem, using a stay suture to create a lead point for this part of the perforated stomach, resecting the perforated stomach by black stapler due to having enough space, and finally converting to classic RYGB by creating a gastric pouch, gastrojejunal anastomosis 75 cm from the Treitz ligament, and finally a jejunojejunal anastomosis.

Results

It should be noted that surgeons must consider any symptoms after procedure as a sign of any complications. Choosing the best approach for complications treatment has a significant role in the patient's satisfaction and curing. Our patient was discharged without further problem and her BMI one year after initial LSG was 24.2 kg/m².

Conclusion

In patients with history of LSG, which complicated by fistula, in the possibility of finding fistula tract, gastric resection of the leak point and converting to RYGB can be considered as safe and applicable treatment if the we have enough space in the stomach.

V-111

REVERSAL OF ROUX-EN-Y GASTRIC BYPASS FOR RECURRENT CHOLANGITIS

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Background

After Roux-en-Y gastric bypass common bile duct stones can be difficult to treat, due to the altered anatomy. Different techniques to reach the common bile duct can be used: laparoscopic assisted ERCP, endoscopic ultrasound-directed transgastric ERCP (EDGE), percutaneous transhepatic, laparoscopic common bile duct exploration, ... When repeated access to the ampulla of Vater is necessary, reversal of the gastric bypass can be considered.

Objectives

A 74-years old patient underwent a Roux-en-Y gastric bypass twelve years ago. In the last 2 years he was admitted to the hospital eight times because of sepsis due to cholangitis. Different techniques were used to remove the common bile duct stones, to drain and to explore the recurrence of the sepsis. First the stones were removed via a percutaneous transhepatic procedure. Because of recurrence an EDGE-procedure was performed with placement of an hot axiosstent between the pouch and the remnant stomach. This hot axios stent luxated and was removed twice. Since the patient had a recurrence of the cholangitis, multidisciplinary discussion suggested to reverse the Roux-en-Y gastric bypass to get better anatomical and more permanent access to the common bile duct.

Methods

During laparoscopy the gastro-gastric fistula after EDGE- procedure was seen posterior at the gastro-enterostomy. The pouch was transected proximal of the fistula. After enlarging the fistula-opening to the remnant stomach, a manual anastomosis was made between the pouch and the remnant stomach. The entero-enterostomy was dismantled and the distal biliary limb was reconnected to the proximal alimentary limb to reduce the risk of bacterial overgrowth.

Results

Post-operative upper GI-series showed a good passage of the contrast, without leakage. Oral intake was started at day two. Antibiotics to treat the cholangitis (Meropenem and Vancomycin) were continued for 2 weeks.

Conclusion

Laparoscopic reversal of Roux-en-Y gastric bypass is feasible, even after EDGE-procedure. In this case reversal was done to get a more anatomical, permanent access to the common bile duct.

V-112

REVISION OF A ROUX-EN-Y GASTRIC BYPASS WITH ABERRANTLY LONG AFFERENT AND SHORT EFFERENT ROUX LIMBS

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Background

We present a 59-year-old female, with history of DM-II and prior BMI 39, status post Roux-en-Y Gastric Bypass (RNYGB) eleven years ago at a different facility. She underwent laparoscopic cholecystectomy and upper endoscopy eight years ago with our team. At that time, she was noted to have surprising anatomy with two long similar lengths of jejunum emanating from the gastric pouch. This appeared more consistent with a mini-Gastric Bypass or variant of Billroth I anatomy, despite her operative notes indicating a RNYGB. Her full anatomy was obscured by significant adhesions. She was lost to follow up but recently presented with oral intolerance, nausea, and intermittent bilious emesis for several months. Her BMI was now 25.7, and she had mild malnutrition on lab work. Work up included a XR Small Bowel Follow Through which revealed a RNYGB anatomy but with an aberrantly long afferent Roux limb measuring 35cm, and short efferent Roux limb measuring 40cm. Her symptoms matched that of Candy Cane Syndrome, and bile reflux from a short efferent Roux limb.

Objectives

Surgical revision of aberrant RNYGB with long afferent Roux limb and short efferent Roux limb to normal RNYGB anatomy, to alleviate symptoms of bile reflux, oral intolerance, and malnutrition.

Methods

Laparoscopic revision of RNYGB with extensive lysis of adhesions, hiatal hernia repair, creation of new jejunal-jejunostomy with lengthening of efferent Roux limb (from 40cm to 100cm) by staple detachment and distal relocation of biliopancreatic limb, and resection of abnormally long afferent Roux limb (from 35cm to <5cm), with intraoperative endoscopy. The new efferent Roux limb was kept less than 150cm given the patient's current BMI and malnutrition.

Results

Successful surgical intervention with immediate resolution of the symptoms that were affecting her for months. She has maintained her BMI and her nutritional labs normalized.

Conclusion

It is important to keep the afferent Roux limb short to avoid Candy Cane Syndrome, and the efferent Roux limb sufficiently long enough to prevent bile reflux. In cases of RNYGB revision, the patient's BMI and nutritional status should be taken into account when deciding on how to alter their Roux limb.

V-113

REVISION OF OAGB-MGB FOR HYPOALBUMINEMIA AND INTRACTABLE DIARRHOEA

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Introduction

Bariatric and metabolic surgery is the best sustainable therapy for severe obesity and its comorbidities. There are various bariatric operations. OAGB/MGB, ranked the 4th most common bariatric surgery in the world, is characterized by a long narrow lesser curvature gastric pouch with a wide single anastomosis, a gastro-enterostomy, at a point on the jejunum at 150-350cm {Biliopancreatic Limb (BP)} from the DJ junction. The length of this BP limb has been shown to determine the incidence of complications after the OAGB/MGB, depending on the original total small bowel length and the length of the limb distal to the one anastomosis, gastro-enterostomy (the common limb). The surgical treatment for this problem is shortening the BP limb length to increase the common limb length

Objectives and Methods

A video is presented illustrating a step-by-step laparoscopic revision of an OAGB/MGB in a patient with hypoalbuminemia and intractable diarrhea by reducing the BP Limb length and lengthening the common limb length. The video has inserts of the endoscopic findings also.

Results

The patient was found at surgery to have a BP limb of 180cm and a common limb only 200cm long. The gastro enterostomy was taken down and a new anastomosis was made at a point 50cm from the ligaments of Treitz. This left the patient with a BP limb 50cm long with a common limb of 330cm long. The Patient had an unremarkable recovery and her albumen raised to 2.89 g/dl at two-months post the revision surgery.

Conclusion

Most patients are left with at least 300cm of a common limb after an OAGB/MGB operation and do not have hypoalbuminemia and/or intractable diarrhea. However, in patients with a short total bowel length, a commonly acceptable BP limb length may result in a short common limb like in this case and the patient will have problems with diarrhea and hypoalbuminemia. These types of cases are managed by altering the limb lengths of the patient by increasing the common channel to at least a minimum of 300cm at the expense of the biliopancreatic limb.

Keywords: Bariatric and metabolic; OAGB/MGB; BP Limb; Common Limb; Hypo-proteinemia; Diarrhea.

V-114
REVISIONAL RYGB AFTER LSG IN A SITUS INVERSUS TOTALIS PATIENT

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Case presentation

A 25 years old female patient known to have situs inversus totalis, she is *complaining of weight recurrence and GERD post LSG which she underwent 3 years earlier, her BMI on presentation was 55 kg/m² (Wt:127 kg, Ht:152 cm)*

Background

Organ distribution within the human body has three forms; Situs solitus which is the normal asymmetric distribution of the abdominothoracic visceral organs “the normal arrangement”, Situs inversus; the mirror image of (situs solitus), and Situs ambiguus

Discussion

The operation is usually performed in a mirror image technique to all parts of the operation which makes it challenging and increase the operative time, it can be done with mirror image setting (port sites and surgeon position) or in the usual setting, using opposite hands when handling the instruments and the opposite foot to operate the foot pedal. Investing time in identifying anatomy and the relationship of the Roux limb to the LT, BP limb and JJ anastomosis is mandatory.

Conclusion

Proper assessment of such patients prior to surgery with history, full physical examination, and fitting imaging modalities is essential, awareness of the inherited condition before undertaking the operation allows for advanced planning and preparation taking into consideration the anatomical orientation esp. during port placement. Bariatric surgery is highly manageable in patients with anatomical anomalies.

V-115

REVISIONAL SURGERY – SLEEVE GASTRECTOMY TOWARDS DUODENAL SWITCH

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Revisional bariatric surgery is a surgical procedure performed on patients who have previously undergone bariatric surgery and have experienced complications or have not achieved the desired results. It is a complex procedure that requires careful evaluation and a tailored approach for each patient, as the factors contributing to complications and lack of success vary from patient to patient.

The aim is to show the surgical technique of duodenal switch with pyloric artery section, associated with a hygienic dermolipectomy in the context of revisional bariatric surgery.

We present the case of a 48-year-old female patient with a history of laparoscopic vertical gastrectomy and cholecystectomy in 2014, with arterial hypertension, type 2 diabetes mellitus, and polycystic ovary syndrome. She does not have GERD. She has a maximum/current BMI of 59/51 kg/m² and a maximum/current weight of 167/142 kg, with a height of 167cm.

The video shows the surgical technique of a duodenal switch in the context of a previous sleeve gastrectomy, under a laparoscopic approach. It includes the gastric and duodenal dissection, transection of the duodenum, manual duodenum-ileum anastomosis and mechanical foot of the loop. We also associated a hygienic dermolipectomy in the same surgical act.

While revisional bariatric surgery carries certain risks and complications, it can be an effective option for those patients who have not achieved the desired results with initial bariatric surgery. With adequate preparation and follow-up, revisional bariatric surgery can help patients achieve significant weight loss and improve their health and quality of life.

V-116
ROBOTIC BIPARTITION THE ORLEANS TECHNIQUE

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Background

This Prospective multicentric randomized controlled trial, led by the University d'Hospital Center on Lille – France, compares the efficacy and safety of Sleeve Gastrectomy with Transit Bipartition (SG+TB) versus Roux-en-Y Gastric Bypass (RYGB)

Objectives

The trial aims to demonstrate the superiority of the SG+TB on the standard RYGB to increase weight loss assessed by the Excess Weight Loss percentage (EWL%) at 2 years. This main objective will be evaluated in patients who had SG+TB or RYGB as a first intention procedure in patients with BMI ≥ 40 kg/m² or BMI ≥ 35 kg/m² associated with one co-morbidity which will be improved by surgery or as a second intention procedure after SG failure in regard of insufficient weight loss or regain. This presentation shows the Orleans University Hospital Center standardized technique, as performed by Dr Adel Abou-Mrad.

Methods

The Orleans center is an Expert Obesity center well familiar with sleeve and RYGB robotic techniques. The standardization of the “bipartition procedure” was essential to the well conduct of the trial there. A Da Vinci X was used. Two variants procedure were considered regarding the docking of the device and the way of performing the anastomosis, either manual or stapled. The video describes the two procedures with their technical specificities. For a matter of simplicity, the cephalic docking technique was privileged. It is the same for the RYGBP robotic standardized procedure. This enhances the team performance and efficiency.

Results

Since May 2023, more than 22 inclusions were recorded within this center. Morbidity seems equal to the RYGB procedure, with promising results on weight loss. The need for vitamins supplementation is yet to be confirmed. The study is too recent to bring solid conclusions for now. The two years follow-up data analyses should bring confirmed answers.

Conclusion

Multicenter prospective controlled study seems best to establish facts on special surgical technics. Bipartition is considered as a promising procedure. To properly conduct a study, standardization must be established to better avoid failure. Although each surgeon has his own way doing surgery, one should learn from the experience of others to diminishing morbidity. The technique described seems feasible, reproducible, and safe.

V-117

ROBOTIC CONVERSION OF SLEEVE GASTRECTOMY AND INCIDENTALLY FOUND JEJUNO-ILEAL (JI) BYPASS TO ROUX-EN-Y GASTRIC BYPASS (RYGB)

Dennis Smith - Lauren Lapp - Catherine Santos

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Background

Bariatric surgery operations are more complicated to perform when previous small bowel, gastric or hiatal hernia (HH) surgery has been done. The complexity of bariatric revisional operations is further impacted by unexpected intraoperative findings that alter the surgical plan. The robotic platform, with stable 3-D vision, multi-arm control, enhanced dexterity and ergonomics may improve surgeon performance in such revisional operations.

Objective

To describe how incidental discovery of a JI bypass altered the surgical plan of a sleeve gastrectomy conversion to RYGB with HH.

Methods

This case is a 61 yo female s/p laparoscopic sleeve gastrectomy with HH repair in 2014, and a re-sleeve with redo HH repair in 2018. No records of those previous operations were available. The patient had a BMI of 27.7 but was having chronic reflux symptoms. Esophago-gastro-duodenoscopy demonstrated a 4-5 cm recurrent and incarcerated HH containing a portion of her sleeve, with a mid-sleeve stenosis, and an UGI showed a moderately sized HH. A robotic platform (da Vinci Xi) was used to perform the procedure. Intraoperatively the patient was found to have had small bowel surgery of which the patient was unaware. The small bowel changes were consistent with a JI bypass, and this was confirmed with an intraoperative phone conversation with the performing surgeon. We proceeded to perform a RYGB.

Results

The HH was repaired, and the revision from sleeve gastrectomy to RYGB was done once the anatomy was defined. The previously made defunctionalized limb was used for the Roux limb. The patient was readmitted briefly in the early postoperative period for ileus and again several months postoperatively for constipation.

Conclusion

Unexpected intraoperative findings can sometimes present challenges in defining anatomy and can change the surgical plan. Knowledge of the patient's previous surgical history should be documented as well as possible, and thorough knowledge of the patient's preoperative condition can help in intraoperative decision making. This video demonstrates operative technique as well as some of the decision making that we are sometimes challenged with intraoperatively.

V-118
ROBOTIC MANAGEMENT OF A COMPLICATED SLEEVE GASTRECTOMY IN A PATIENT WITH A PANCREATIC INTRADUCTAL PAPILLARY MUCINOUS TUMOR

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History

A case of a 64 old year lady, complaining of dysphagia, postprandial severe chest pain and severe GERD after laparoscopic sleeve gastrectomy done in 2018. Her initial weight was 103 kilos, 1,61 m height with a BMI of 39,7 kg/m². Actual Weight: 70Kilos BMI 27 kg/m². History of a pancreatic intraductal papillary-mucinous tumors under surveillance. Dyslipidemia, tachy-arrythmia, fibromyalgia. Smoker 40 pack-year (12 years weaning). Cholecystectomy, temporary ostomy for rectovaginal fistulae, with reduction medial laparotomy. Sleeve gastrectomy done in 2018. Esophageal opacification: Hiatal Hernia, gastric stenosis and proximal esophageal widening. Failure of endoscopic dilatation in September 2020.

Surgery

Robotic approach: hiatal hernia reduction, resection of gastric diverticula (8cm). The Docking was cephalic. The gastrectomy seemed normal at first. Dissecting the esophageal hiatus. Uncovering an intrathoracic large right diverticulum appended to the right side of the gastric pouch. Dissecting the hiatus, exposing the crus from both sides. Calibrating the esophagus with a 36F bougie. Resecting the diverticulum by applying two cartridges of the robotic stapler. Closing the Hiatus by suturing together the crus with a non-adsorbable 3/0 V-loc string. Blocking the running suture with a clip. Fixing the abdominal esophagus to the crus with an adsorbable 3/0 V-loc string with a running suture. Verifying the smooth bougie passage through the hiatus. There was no ischemia on Fire Fly test (green of indocyanine test). A drainage tube was left in place.

Follow up

Esophageal opacification showed a good passage through all the gastric tube. Smooth post operative course. Discharged on day 2. Follow up at 1 month, 3 months and 1 year: patient is doing well. No dysphagia, remission of GERD.

Conclusion

Access to the duodena-pancreatic block for endoscopic surveillance can be a counter indication for by-pass surgery, especially in specific potentially degenerative lesions. Robotic approach to complex cases is safe, facilitating surgery. Adequate preoperative strategy can be adapted to the surgical finding. Patient must be aware of the possible change in surgical strategy to serve their best interest.

V-119

**ROBOTIC RE-SLEEVE GASTRECTOMY FOR IMPOSSIBLE GASTRIC BYPASS
PROCEDURE CASE REPORT**

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Case Report

A 58 years old man complaining of weight regain after a Sleeve gastrectomy. Maximum weight: 162 Kg (actual weight). Minimum Weight after surgery 125 Kg. Height: 181cm. BMI: 49.

History

Treated apnea syndrome, GERD under treatment, heavy smoker, appendicectomy, small bowel occlusion operated at the age of 7 by medial vertical laparotomy. After 9 months' preparation without significant improvement in weight loss and after collegial assessment, the patient was taken to surgery.

Surgical observation

Small bowel adhesions, difficult dissection and pursuing adhesion removal was considered dangerous. Dilated gastroplasty with thickening and fibrosis of the gastric wall. Decision of re-Sleeve. The patient has been warned of this possibility and his consent have given previous to surgery. Re-Sleeve: difficult, 27 cm gastrectomy length.

Follow-up

Smooth. Hospital discharge on J2. At one month: asymptomatic, no GERD. Weight at 1 month: 144 Kg.

Discussion

Weight can occur after bariatric surgery. History of laparotomy and small bowel occlusion can be predictive of surgical difficulties. The surgical strategy and incidents must be closely discussed with the patient. In case of impossible By-pass after a Sleeve gastrectomy, the presence of dilated gastroplasty a Re-Sleeve procedure can give good results. Robotic approach is very helpful in difficult cases.

Conclusion

In case of regain weight after proper patient's preparation, surgery can be helpful in detecting anatomical anomaly. The robotic use is a major element in facilitating the surgical procedure. Patients with regain weight can be given a second surgical opportunity to solve this problem.

V-120
ROBOTIC REVISION OF RETROCOLIC BILLROTH 2 TO ROUX-EN-Y GASTRIC BYPASS (RYGB)

Dennis Smith - Catherine Santos - Lauren Lapp

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Background

Bariatric metabolic surgery operations are made more complicated and challenging when previous gastric surgery has been done. Operations such as the Billroth 2 are not commonly seen, but when encountered, revision to RYGB is often the operation being performed. The robotic platform affords stable 3-D vision, multi-arm control, enhanced dexterity and ergonomics that can improve the surgeon's performance, reduce surgeon fatigue and increase surgeon stamina.

Objective

To describe our technique in totally robotic conversion of a retrocolic Billroth 2 to RYGB.

Methods

This is a 47 yo female who had previously undergone an open Antrectomy with Billroth 2 reconstruction in 2008 for ulcer disease. At the time of our revision, her BMI was 51.2, and she had a history of hypertension, hyperlipidemia, obstructive sleep apnea, and gastroesophageal reflux disease. Esophago-gastro-duodenoscopy demonstrated anatomy consistent with an antrectomy with Billroth 2 reconstruction as well as a tortuous efferent limb. A da Vinci Xi robotic platform (Intuitive Surgical, Sunnyvale, CA, USA) was used to resect the previous Billroth 2 gastrojejunostomy along with a portion of her previous gastric pouch, and perform a RYGB.

Results

The retrocolic Billroth 2 gastrojejunostomy was successfully revised to a RYGB. The patient tolerated the procedure and recovered well.

Conclusion

A revision of a Billroth 2 to a RYGB can be a complex and challenging bariatric operation, especially as most of the ones we have encountered were performed open and in a retrocolic fashion. This video demonstrates technique as well as some of the advantages of a robotic platform in the performance of complex and challenging bariatric surgery.

V-121

ROBOTIC SLEEVE GASTRECTOMY IN A PATIENT WITH COLOSTOMY AS A PATHWAY FOR COLOSTOMY REVERSALJoseph Greene*Holy Cross Germantown Hospital, Department of Surgery, Germantown, Maryland, United States***Background**

Obesity is an independent predictor of adverse outcomes following Hartmann reversal, including wound infection, need for diverting ileostomy, time to reversal, and overall morbidity. Weight loss through bariatric-metabolic surgery is an effective pathway to lower BMI and increased safety of Hartmann reversal. However, performance of bariatric-metabolic surgery in the presence of a colostomy as well as significant intrabdominal adhesive disease status post open sigmoid colectomy and end colostomy poses a number of challenges.

Objectives

This is a case report of a 43-year-old male with a BMI of 47 who, while preparing for Roux-en-Y gastric bypass, experienced an episode of perforated sigmoid diverticulitis and underwent an emergency Hartmann's procedure. I propose that assisting the patient to achieve bariatric-metabolic surgery will afford him the best weight loss in preparation for colostomy reversal.

Methods

Predicting that there would be significant adhesions involving the small bowel, we decided that a sleeve gastrectomy would be a technically safer bariatric-metabolic operation than Roux-en-Y gastric bypass. Two months following his recovery from the Hartmann procedure, to allow for the postoperative adhesions to attenuate, he was scheduled for robotic sleeve gastrectomy.

Results

The operation required significant planning, effective team communication, and technical modifications to execute successfully. This video illustrates a particular method to prepare and drape an abdomen with a colostomy in sterile technique for minimally invasive surgery, the modifications to the incision/cannula placement to accommodate the colostomy, effective team communication to avoid intraoperative contamination of the surgical field, and technical pearls for performance of robotic sleeve gastrectomy in a reoperative abdomen.

Conclusion

Robotic surgery can be utilized to safely perform sleeve gastrectomy in a patient with a colostomy, to facilitate weight loss prior to colostomy reversal. The patient achieved excellent weight loss, 101lb (28% total weight loss) at 9 months status post sleeve gastrectomy, and has successfully undergone colostomy reversal.

V-122
ROBOTIC TAKEDOWN OF NISSEN FUNDOPLICATION WITH REPAIR OF HIATAL HERNIA, AND ROUX-EN-Y GASTRIC BYPASS

Dennis Smith - Lauren Lapp - Catherine Santos

AdventHealth, Department of Bariatric Metabolic Surgery, Celebration, United States

Background

Bariatric surgery operations are made more complicated and challenging when previous gastric surgery has been done. Taking down a fundoplication during a bariatric operation can be one of the more challenging operations we do in bariatric surgery, especially when a hiatal hernia repair is done as well. The robotic platform affords stable 3-D vision, multi-arm control, enhanced dexterity and ergonomics that can improve the surgeon's performance, reduce surgeon fatigue and increase surgeon stamina.

Objective

To describe our technique in totally robotic takedown of a Nissen fundoplication with a repair of hiatal hernia and a Roux-en-Y gastric bypass (RYGB).

Methods

This is a 46 yo M s/p Laparoscopic Nissen Fundoplication in 1998, with BMI of 42 and a history of Barrett's Esophagus, GERD, HTN, HLD, OSA and gastroparesis. EGD and CT demonstrated a small to moderately sized hiatal hernia. A da Vinci Xi robotic platform (Intuitive Surgical, Sunnyvale, CA, USA) was used to take down the fundoplication, repair the hiatal hernia, and perform a RYGB.

Results

The fundoplication was successfully taken down, the hiatal hernia repaired, and the RYGB completed. The patient tolerated the procedure well and recovered well.

Conclusion

A RYGB together with taking down a fundoplication and repairing a hiatal hernia is a complex and challenging bariatric operation. This video demonstrates technique as well as some of the advantages of a robotic platform in the performance of complex and challenging bariatric surgery.

V-123

ROBOTIC-ASSISTED GASTRIC BAND REMOVAL WITH CONVERSION TO ROUX-EN-Y GASTRIC BYPASS

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Background

Adjustable gastric banding (AGB) was first introduced in the 1990s as a safer and less invasive surgical alternative to the bariatric procedures available at that time. Despite promising early results, AGB has been associated with high failure rates of up to 40-66%, with approximately 25% requiring revisional surgery mainly due to insufficient weight loss (IWL). Conversion to Roux-en-Y gastric bypass (RYGB) is the preferred revisional approach for most cases of failed AGB, as it leads to a more significant and long-term weight loss than other techniques.

Case Presentation

33-year-old female with a BMI of 41.1 kg/m² presenting with weight regain and reflux status post AGB 11 years ago. The patient had a previous revisional surgery 9 years ago due to a slipped band. Preoperative workup included an esophagogram that demonstrated a well-positioned gastric band, normal esophageal motility, and no evidence of hiatal hernia. The upper GI endoscopy showed LA grade b reflux esophagitis and gastric band indentation. Due to the patient's elevated BMI and reflux symptoms, it was decided to perform a robotic-assisted RYGB conversion. The patient had no intra- or post-operative complications and was discharged on day 1. On the latest follow-up, patient is doing well and denies reflux recurrence.

Conclusion

RYGB conversion is an alternative in patients with IWL after an AGB. Compared to other revisional surgeries, such as sleeve gastrectomy, RYGB leads to the most significant and sustained weight loss.

V-124
ROBOTIC-ASSISTED REVISIONAL BARIATRIC SURGERY FROM ROUX-EN-Y GASTRIC BYPASS TO INTESTINAL TRANSIT BIPARTITION

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Background

Revisional surgery for weight recurrence (WR) after Roux-en-Y Gastric Bypass (RYGB) is challenging in its indication, execution, and postoperative follow-up. Sleeve Gastrectomy with Intestinal Transit Bipartition (ITB) might be one the options for WR after RYGB.

Objectives

Video presentation of robotic-assisted revisional bariatric surgery from Roux-en-Y Gastric Bypass to Intestinal Transit Bipartition.

Methods

Female patient, 41 years old, submitted to Roux-en-Y Gastric Bypass with gastric ring 20 years ago, in 2003 (by that time, she had 110 kg, with a BMI of 39,3). She achieved successful weight loss outcomes, reaching 60 kg (BMI 21,77). However, due to dysphagia, vomiting, and food intolerance, she underwent ring removal in 2019, followed by important weight recurrence reaching 108kg (BMI 39,19). Esophagogastroduodenoscopy (EGD) and the 3D CT-Scan showed a small pouch (5cm), with no anatomic alterations. Therefore, Sleeve Gastrectomy with Intestinal Transit Bipartition (ITB) was chosen as a revisional procedure to improve its metabolic effects.

Results

Intraoperatively, we found a small gastric pouch, with no significant anatomic alterations. It was performed a robotic-assisted revisional bariatric surgery from RYGB to ITB. The intraoperative and the postoperative period were both uneventful. The postoperative barium esophagography showed good progression of oral contrast through the duodenum and through the gastro-ileal anastomosis.

Conclusion

Revisional ITB can be a good therapeutic option for weight recurrence after RYGB without significant anatomic findings. It can be a safe option whit the aid of the robotic platform.

V-125

ROBOTIC-ASSISTED REVISIONAL ROUX-EN-Y GASTRIC BYPASS FOR LARGE HIATAL HERNIA AND MASSIVE INTRATHORACIC SLEEVE MIGRATION

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Background

Severe Gastroesophageal Reflux Disease (GERD) after Sleeve Gastrectomy is often related to anatomical complications. Hiatal hernia and intrathoracic sleeve migration can be treated with hiatoplasty and conversion to roux-en-y gastric bypass

Objectives

Video presentation of robotic-assisted revisional roux-en-y gastric bypass for large hiatal hernia and massive intrathoracic sleeve migration causing severe GERD.

Methods

Female patient, 77 years old, submitted to Sleeve Gastrectomy 4 years ago. She developed GERD symptoms associated with dysphagia, with no improvement after optimized clinical treatment. Imaging exams showed hiatal hernia and significative anatomic alterations in the gastric tube with an important intrathoracic sleeve migration. Therefore, it was chosen to indicate a RYGB as a revisional bariatric surgery.

Results

Intraoperatively, we found a big hiatal hernia and a remnant gastric antrum, associated with a gastric tube stenosis. It was performed a robotic-assisted conversion to RYGB and a hiatal hernia repair. The intraoperative and the postoperative period were both uneventful.

Conclusion

RYGB conversion after SG is a good therapeutic option for cases in which there are GERD symptoms, especially when there are anatomic alterations of the gastric tube, and the minimally invasive surgery is an effective and safe choice.

V-126
SADI – SLEEVE ROBOT

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Background

The SADI-S is a technique developed to overcome nutritional complications and the complexity of the biliopancreatic bypass with Y loop or “Duodenal Switch”. The SADI-S differs mainly by the conservation of the pylorus and the realization of a single anastomosis. The conservation of the pylorus would allow to avoid bile reflux and would thus justify that the Roux-en-Y deviation is not necessary. The length of the loop depends on the BMI (300 cm if the BMI is less than 50 kg/m² or 250 cm from 50 kg/m²). Preservation of the pylorus would also prevent postprandial hypoglycemia and dumping syndrome, which are still quite frequent in patients undergoing Roux-en-Y gastric bypass surgery. This laparoscopic technique is not yet validated and still requires further explorations in the literature.

Objectives

We wanted to adapt the laparoscopic surgical technique of the SADI-S to the da vinci robot.

Methods

We performed a re-sleeve and a duodeno-ileal anastomosis with the robot without any difficulty, the steps of which are described in the video.

Results

The post-operations were simple. According to our first results in our center, the patients have a greater weight loss than after a gastric bypass, with little undernutrition and a quasi normal transit. These results obviously need to be confirmed.

Conclusion

With the arrival of the robot in our center, we have reproduced the same technique as in laparoscopy, combining more precision while improving the comfort of the surgeon, with the same results for the patients.

V-127

SEVERE PROTEIN-CALORIE MALNUTRITION AND WERNICKE-KORSAKOFF SYNDROME DUE TO RECURRENT OBSTRUCTION FOLLOWING ROUX-EN-Y GASTRIC BYPASS

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Background

Severe protein-caloric malnutrition and Wernicke-Korsakoff syndrome are among the most serious and probably underestimated complications of bariatric surgery.

Objectives

We report a case of severe protein-caloric malnutrition and Wernicke-Korsakoff syndrome as consequence of obstructive symptoms following Roux-en-Y Gastric Bypass (RYGB).

Methods

Presentation of the video of a diagnostic laparoscopy of a 50 year old male presenting with obstructive symptoms, severe protein-caloric malnutrition and Wernicke-Korsakoff syndrome. The patient had been submitted to RYGB eight years before at another institution and adhesiolysis due to intestinal obstruction 3 years before (also at another institution).

Results

Pre-operative imaging revealed severe enteral obstruction but was not diagnostic regarding the etiology. A diagnostic laparoscopy was performed that revealed severe enteral distension with signs of chronic ischemia due to torsion of the alimentary loop and pseudo-herniation of the entire distal small intestine. Resection of the original alimentary loop and reanastomosis was performed, followed by gastro-gastric anastomosis with bypass reversal. Progressive recovery of nutritional status and reversal of Wernicke-Korsakoff syndrome was observed.

Conclusion

Obstructive symptoms following bariatric surgery may have severe consequences. The cause of the obstruction may be difficult to ascertain by imaging. Diagnostic laparoscopy performed by surgeons less experienced in bariatric surgery may be unsuccessful. The incorrect assembly of the RYGB may lead to life threatening complications and very significant patient suffering. Due to its' specificities, evaluation of patients previously submitted to bariatric surgery and presenting with obstructive symptoms should be made, whenever possible, by experienced bariatric surgery teams.

V-128
SINGLE PORT SLEEVE GASTRECTOMY ASSISTED BY MAGNETIC RETRACTOR

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Background

Minimally invasive surgery is currently the approach of choice for bariatric and metabolic surgery. Single port (SP) surgery can be considered as a suitable option in selected surgical procedures, obtaining the same perioperative results, and being facilitated if magnets are used as both hepatic and tissue retraction tool. Sleeve gastrectomy (SG) is an ideal technique for SP surgery with good cosmetic results and reduced postoperative complications.

Objectives

To introduce SG as the ideal technique to be performed by SP. The use of magnets as liver retractor allows correct exposure of the surgical field and avoids a possible extra incision for the introduction of a regular liver retractor.

Methods

A 47-year-old female patient with a personal history of severe SAHS and hypertension is presented. The maximum weight was 112 kg (BMI 42.26 kg/m²) and pre-surgical weight was 99.1 kg (BMI 37.39 kg/m²). A SP SG on 37.5 Fr tutor in lesser curvature was performed in October 2022. The procedure was assisted by an internal magnet connected to a grasper attached to the liver; retraction of the left hepatic lobe was achieved using an external magnet.

Results

Operative time was 108 minutes and tightness was checked with methylene blue. Hospital stay was 18 hours, and no perioperative complications were reported. Follow-up was carried out at one and three postoperative months, with a current weight of 78 kg (BMI 29.4 kg/m²) and %EBWL 74.6%. In the postoperative satisfaction survey, the patient reported being very satisfied with the cosmetic result.

Conclusion

Magnet-assisted SPS for SG is a safe and effective surgery. It allows to reduce the number of incisions and thus obtain an optimal aesthetic outcome that results in a high degree of satisfaction of our patients.

V-129

SINGLE-PORT LAPAROSCOPIC SLEEVE GASTRECTOMY WITH MINIMALLY INVASIVE DOUBLE-RETRACTOR METHOD

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Background

Single-port laparoscopic sleeve gastrectomy (SG) is a technique that is intriguing as it resulted in less scarring. However, adequate skills are needed as to achieved the intended therapy goal, that is adequate gastric sleeve resection and safety of the operation.

Objectives

In this abstract, we share our experience in performing Single-port laparoscopic SG using a minimally invasive double-retractor method. We retract the liver as well as the gastric body using a modified T-Tube catheter and suture thread.

Methods

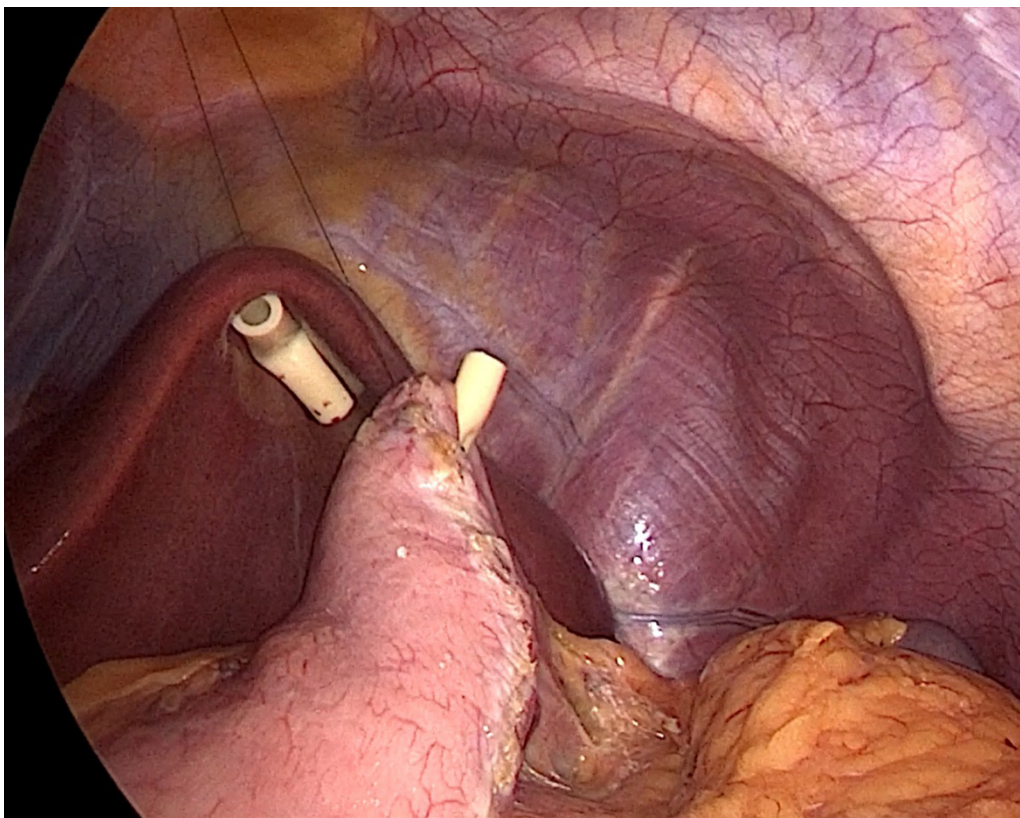
In this current video submission, the patient was a female, 39 years old, BMI 41 kg/m², and with preoperative diagnosis of Metabolic syndrome, type-2 diabetes mellitus, sleep apnea, hyperinsulinemia, dyslipidemia, hyperemia, gallstone, elevated CA724, and liver cyst.

Results

The procedure took approximately 1 hour and 45 minutes, the procedure went well without the need for drainage placement. The patient was discharged at the third postoperative day.

Conclusions

The double retractor method is easy and feasible. It increases the safety and quality of the single-port laparoscopic SG procedure, without increase in surgical cost. We acknowledged that more study will be needed before promoting this technique.



V-130
SINGLE-PORT SLEEVE GASTRECTOMY WITH PARIETAL PROPHYLACTIC MESH PERFORMED BY A JUNIOR SURGEON

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Background

Single-incision laparoscopic sleeve gastrectomy (SILSG) is nowadays a feasible and safe procedure for the treatment of severe obesity. Our department has been a pioneer of SILSG having performed more than 3000 procedures until today using a standardized technique. This procedure is performed by all surgeons of our department including fellows. Intra-abdominal access is routinely obtained through a left hypochondrium incision, which is parallel to gastric stapling and allows an optimal view of the gastroesophageal junction and left crura. SILSG carries a risk of incisional hernia and prophylactic mesh placement can decrease the occurrence of incisional hernia.

Objectives

We present a video of a patients undergoing SILSG with parietal prophylactic mesh placement performed by a junior surgeon.

Methods

The patients is a 51 year-old woman with a BMI of 35.7 kg/m² (102 kg / 1.69 m). Her previous history included dyslipidemia, NASH and herniated disc surgery. The procedure is performed with a standardized left hypochondrium access and all steps required to perform a correct gastric tubularization are described. A prophylactic mesh is placed during parietal closure at the end of the procedure.

Results

Operative duration was 67 minutes and the postoperative course was uneventful.

Conclusion

SILSG with parietal prophylactic mesh placement can be performed safely using a standardized protocole.

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SLEEVE GASTRECTOMY USING A FULLY ROBOTIC THREE-PORT APPROACH AND WITHOUT LIVER RETRACTOR

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Background

Sleeve gastrectomy is the most performed bariatric procedure in the world today. Robotic devices such as the Da Vinci Xi® system can help to perform this technique safely and even reduce the number of ports, thus reducing surgical aggression. This video shows a real robotic SG (RTR-SG) with only three ports and without liver retractor placement.

Methods

A 61-year-old patient with BMI = 39.3 kg/m² was submitted for an RTR- SG. A Da Vinci Xi® model was used and neither laparoscopic assistance nor change of operating table position were required.

Results

The patient was placed in a 23° reverse Trendelenburg position with open legs and arms in full adduction. Only three robotic trocars were used for the access route. It wasn't necessary to use any conventional liver retractor. Nevertheless, the left liver lobe was cranially tractioned using a 2/0 barbed absorbable suture. The gastric sleeve was performed starting 6 cm proximal from the pylorus, using a 36Fr Faucher bougie as a calibrator. Gastric transection was performed using a robotic endo-stapler with blue and white cartridges. Total operative time was 110 min (docking took 5min). Both surgery and postoperative period were uneventful and the patient was discharged on the second postoperative day.

Conclusions

Robotic platforms can significantly minimize both the difficulty and aggressiveness of bariatric surgery. In experienced hands, sleeve gastrectomy can be performed totally robotically using only three ports without making the procedure more difficult or compromising the safety of the procedure.

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SLEEVE STRICTURE AFTER BANDED SLEEVE – A RARE COMPLICATION AND A WAY TO MANAGE IT

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Background

Sleeve stricture is a rare complication that can occur after a banded sleeve gastrectomy procedure (BSG).

Objective

How to treat patient with sleeve stricture endoscopically

Method

A 31-year-old male post BSG presented with persistent vomiting to solid food on and off over period of one month. BSG was done seven months back.

Results

He is a known case of Type II diabetes mellitus and psoriasis vulgaris with steroid induced striae. His BMI was 37.7 kg/m² and weight was 98.9 kgs with HbA1c of 6.17. Patient did very well till five months post operative and lost 20 kgs. Soon he started experiencing vomiting to solid food but not to liquids and lost further 6 kgs in one month. His oral gastrograffin study showed hold-up of contrast s/o stricture. His Upper gastro intestinal endoscopy showed that there was stricture at the region of the band and scope could barely pass through. By using Controlled Radial Expansion (CRE) wire guided balloon dilatation catheter (Boston Scientific) the stricture was dilated.

Conclusion

Post dilatation there was no peri-procedure complication and gastrograffin did not show hold-up of contrast. Patient is doing well and there is no vomiting either to liquids or solids.

Keywords: Banded Sleeve Gastrectomy, Stricture, CRE dilatation.

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SLEEVE TWIST VS STRICTURE: INTRAOPERATIVE ENDOSCOPYVadim Lyuksemburg - John Mitko - Francisco Quinteros - Rami Lutfi*Advocate Illinois Masonic Medical Center, Chicago, United States***Background**

A 44-year-old male with past medical history of BMI 42 s/p laparoscopic sleeve gastrectomy 10 weeks prior, who presented with lightheadedness and dizziness. He has had multiple emergency department visits due to poor oral intake and the sensation of fullness after only few bites of food. He would get admitted to the hospital for IV fluid dehydration and IV thiamine which would make him feel temporary better. A CT scan of the abdomen was unremarkable. An upper GI series was read as normal by radiology, but on review of the images there was angulation of the sleeve. Gastroenterologist was consulted and an esophagogastroduodenoscopy (EGD) was performed which demonstrated moderate kinking and angulation of the sleeve.

Objectives

This case demonstrated the importance of intraoperative endoscopy

Methods

The patient was taken to the operating room for diagnostic laparoscopic after the findings of kinking and angulation of the sleeve.

Results

During the diagnostic laparoscopy, there was angulation of the sleeve was discovered secondary to adhesions formed to the omentum. The adhesions were taken down and omentopexy was performed with 3-0 vicryl to correct the angulation. Intraoperative endoscopy was performed after the omentopexy and there were no further evidence of angulation or kinking.

Conclusion

The patient did well postoperatively with an unremarkable upper gastrointestinal series on postoperative day 1. He was started on clear liquid diet without any issues and discharged home on postoperatively day 1.

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SMALL BOWEL OBSTRUCTION AFTER LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS SECONDARY TO HEMOBEZOAR AT THE JEJUNO-JEJUNAL ANASTOMOSIS

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Background

Laparoscopic Roux-en-Y gastric bypass (LRNYGB) surgery is the second most common bariatric metabolic surgery and significantly alters foregut anatomy. A rare cause of early small bowel obstruction (SBO) includes hemobezoar at the jejuno-jejunal anastomosis (JJ) with an incidence of 0.05% - 1.9%. Clinical findings along with imaging confirmation of proximal biliopancreatic limb and remnant stomach can help confirm the diagnosis. Surgical management includes reoperation with laparoscopic evacuation of clot with or without revision of the JJ anastomosis, and placement of a remnant gastrostomy tube for decompression.

Objective

To report the presentation and management in 2 cases of hemobezoar leading to SBO.

Methods

We performed retrospective review of two patients who presented to our hospital from 4/2022 to 3/2023 for planned LRNYGB, and subsequently developed a SBO due to hemobezoar at the JJ anastomosis.

Results

The index operations were both uncomplicated. However, both patients developed symptoms of nausea, abdominal fullness, and tachycardia along with evidence of post-operative anemia within the first 24-48 hours. Urgent CT scan revealed evidence of SBO with upstream dilation of the biliopancreatic limb and remnant stomach raising suspicion for obstruction at the JJ. The patients underwent emergent surgery where laparoscopy revealed obstruction at the JJ with dilation upstream. In the first case an iatrogenic enterotomy was made in the common channel, and clot was subsequently evacuated. This ultimately required revision of the JJ with an anastomosis to the distal roux limb. In the second case, two enterotomies were made along the roux limb for evacuation of intra-luminal hematoma, and surgical stapler was used to close both without compromise of the bowel lumen. A gastrostomy tube was placed for decompression of the remnant stomach in both patients.

Conclusion

Early SBO after LRNYGB is uncommon; however, early recognition and diagnosis is essential to prevent additional morbidity. Prompt surgical intervention is effective and laparoscopic evacuation of clot can be done with or without revision of the JJ anastomosis.

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SMALL INTESTINE OBSTRUCTION AFTER ROUX-EN-Y GASTRIC BYPASS DUE TO ORANGE FRUIT

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Background

Bezoar is an agglomeration/concretion formed inside the digestive tract due to intake of indigestible material with specific symptoms related to the site of impaction. In Bariatric surgery, cases have been reported since 1998, most commonly associated with Roux-en-Y Gastric Bypass (RYGB). Distinct materials have been described presenting as bezoar: vegetables, fruits, seeds or nuts (Phytobezoar, most common), medication (Pharmacobezoar), milk protein (Lactobezoar), meat and blood bezoar (Hemobezoar).

Case

A 35-year-old female patient, with a preoperative BMI of 40 kg/m². She underwent gastric bypass (14 months) with a current BMI of 29. She reported acute abdominal pain with vomiting in the last 24 hours. She was evaluated by a surgeon and was diagnosed with small bowel obstruction due to a possible internal hernia. The procedure was performed by laparoscopy (initially) and was later converted to open surgery due to the discovery of a mass in the alimentary limb (jejunal lumen). The jejunostomy was performed and the presence of phytobezoar (citrus pulp) was verified, which was extracted, and the jejunostomy was closed by continuous suture. The patient had a uneventful recovered and was discharged on the third postoperative day.

Conclusion

Phytobezoar is a possible cause of SBO after RYGB, and surgeons should be alert to this complication as a differential diagnosis of internal hernia.

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SOS STEPS FOR REVERSAL OF RETRO-COLIC RETRO-GASTRIC ROUX-EN-Y GASTRIC BYPASS

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Background

Laparoscopic Roux-en-Y gastric bypass (LRYGB) remains the gold standard for bariatric surgery, however, due to the possibility of developing non-salvageable complications, the need for reversal of the operation can arise. The reversal of LRYGB is a very challenging operation due to the technical complexity of the primary one. Here we present a simplified steps to follow if the reversal of the operation is needed.

Methods

Reversal of retro-colic retro-gastric RYGB was done laparoscopically.

Outcome

Reversal of LRYGB is possible, however, very challenging.

Conclusion

Reversal of LRYGB is doable as long as early assessment and careful dissection is done. We advise keeping in mind an SOS plan for every step to maintain safety. Reversal of LRYGB should always be the very last option after trying all other possible ones.

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STAPLE MISFIRE DURING SLEEVE TO ANY GASTRIC BYPASS REVISION SURGERY

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Introduction

This patient underwent a sleeve gastrectomy at another institution 10 years ago with a BMI of 54 kg/m². During a year of his surgery, he lost 41 kilograms. Due to weight gain, he requested revisional surgery at our institution with a BMI of 50 kg/m². We intended to perform a Roux-en-Y gastric bypass.

Methods

The patient underwent gastric bypass surgery following abdominal ultrasonography, upper gastrointestinal endoscopy, and preoperative tests, with council clearance. Revision surgery was performed using a laparoscopic method. Due to prior surgery, there were multiple adhesions. Following the application of adhesiolysis, the antrum was observed to enlarge.

Results

After releasing the surrounding tissues of the sleeved stomach, it was decided to divide the stomach at the level of the incisor angularis to form the gastric pouch. During the transverse division of the stomach with a 60 mm purple staple, the tissue was shifted by the staple. Owing to this problem, the stomach was separated 1 cm below and 1 cm above this point using 60 mm black staples, and the damaged stomach tissue was resected. In the subsequent phase of the operation, there were no complications.

Discussion

First, it should not be forgotten that intra-abdominal adhesions might arise as a result of earlier abdominal procedures, and care must be taken when inserting trocars. In this case, we inserted the initial trochar far from the operation field, released the existing adhesions, and then inserted the other trochars. Second, it must be remembered that the thickness of the stomach tissue may have risen in previously operated patients, necessitating the selection of the right staple for the tissue. In this case, the selection of staples without regard for tissue thickness may have contributed to the problem.

Learning Points/Take Home Messages

Revision procedures are complicated by intra-abdominal adhesions. In revision procedures, the thickness of the stomach wall increases, necessitating the use of staples that are compatible with the tissue when forming the stomach pouch.

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STAPLER STUCK DURING SLEEVE GASTRECTOMY – A NIGHTMARE INTRAOPERATIVE COMPLICATION TO DEAL WITH

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Background

The number of laparoscopic sleeve gastrectomies (LSGs) performed annually as a primary bariatric procedure has significantly increased all over the world. LSG has proved to be well tolerated and effective, with a significant reduction of obesity-related co-morbidities. Surgical staplers have been used to divide and approximate tissue for decades. The first surgical stapler was developed in 1908 by Victor Fischer and Humer Hult. In LSG, the surgeon depends on staplers for creation of a small gastric tube, but these staplers sometimes have mechanical problems and malfunction.

Objective

To aim to deal with the stapler stuck complication during sleeve gastrectomy.

Method and case details

A 33 year old male patient with Known case of osteoarthritis, obstructive sleep apnoea, hypothyroidism with weight gain leading to morbid obesity causing changes in life style, was selected for laparoscopic sleeve gastrectomy after reviewing all the routine blood investigation and other imaging investigation. Patient did not have any other co-morbidities.

Result

A subsequent stapler was fired just medial to the stucked stapler towards the bougie side and the progressing firing of the consecutive staplers done cranially towards angle of His. Construction of the gastric tube was completed in the standard manner. In this case, we did not use sutures for staple line reinforcement to avoid excessive narrowing of the gastric tube.

Conclusion

Stapler misfiring during LSG can be a dreadful, but manageable, complication. Surgeons who perform this challenging surgery need to be able to manage this complication.

Keywords: Stapler stuck, Sleeve gastrectomy, complication.

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STOMACH VIABILITY AFTER CHRONIC HIATAL HERNIA CONTAINING THE GASTRIC SLEEVE

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Background

Laparoscopic sleeve gastrectomy is the most common bariatric surgery performed in the world. At the same time, the prevalence of asymptomatic hiatal hernia is up to 90%. It is very common to perform bariatric procedures and have an inadvertent hiatal hernia as a finding. Intra thoracic gastric sleeve migration due to hiatal hernia can be a pathogenic factor in the development or worsening of the symptoms of gastro-esophageal reflux syndrome (GERD) and can even contribute to the lack of response in weight loss after bariatric surgery.

Objectives

To offer a clinical review and surgical decision choice in this kind of cases where the security of the patient prognosis can change the initial plan of surgery.

Methods

A 56- year- old woman with typical symptoms of GERD in the last 6 months and weight regain after a gastric sleeve 8 years prior. Based on the symptoms, we performed an upper GI endoscopy, which revealed a large hiatal hernia and no signs of esophagitis. The patient was scheduled to perform surgery to perform a hiatal hernia repair and Roux-en-Y-gastric bypass (RYGB). In the operating room, it was evidenced that almost 80% of the gastric sleeve had migrated to the thoracic cavity with multiple adhesions. After returning the sleeve to the abdominal cavity, we noticed the tissue of the proximal stomach looking pale. We performed a transoperative upper GI endoscopy to corroborate and made the decision to do the RYGB in a second time surgery.

Results

The patient was asymptomatic on subsequent visits and after 3 months we performed the RYGB without complications, resulting in significant improvement of GERD symptoms and weight loss.

Conclusion

All bariatric surgeries can present hiatal hernia in the future. Although medical treatment is the first line of treatment for symptoms related to hiatal hernia, in the presence of a gastric sleeve, RYGB is a great option. It is prudent to perform the surgery in a second stage if the risks to the patient are observed during revisional surgery.

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STOMACH WITHIN PARASTOMAL HERNIA: WOULD YOU OFFER SLEEVE?

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Background

The simple nature of sleeve gastrectomy (SG) as well as its confinement to the upper abdomen makes it a favorable bariatric surgery choice in patients with obesity and concomitant ventral hernias. Having stomach within the hernia is considered a relative contraindication for SG, however, it remains a great surgical option as a bridge to hernia repair.

Objectives

To show that SG is a feasible option for patients with obesity who have stomach within ventral hernia as a bridge for surgical repair.

Methods

A 38-year-old female with a history of medically complicated obesity (BMI=66 kg/m²), complicated ulcerative colitis (underwent colectomy with ileostomy, complicated by a rectal stump blowout and severe sepsis) presenting for sleeve gastrectomy as a bridge to parastomal hernia repair. Preoperative imaging showed a large parastomal hernia with loops of bowel plastered to the abdominal wall. At the time of the operation, the stomach was shown to be pulled into the hernia. The stomach was then manually reduced using both traction and external compression. The greater curvature vessels were dissected until the level of the duodenum to prevent remigration of sleeved stomach into the hernia. The sleeved stomach was also fixed to the retroperitoneum as a further measure to mitigate the risk of remigration.

Results

The patient had an uneventful hospital stay and was discharged on postoperative day 3. On 30-day follow-up, the patient had no complaints, was progressing with diet as tolerated, and was found to have a BMI=60.6 kg/m². There were no signs of remigration of sleeved stomach into the hernia.

Conclusion

Patients with stomach within hernia should not be denied sleeve gastrectomy. Attempts to prevent re-herniation of sleeved stomach into hernia are crucial to minimize complications.

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SUCCESSFUL ENDOSCOPIC TREATMENT OF CANDY CANE SYNDROME

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Background

Candy cane syndrome refers to post-prandial nausea, pain and vomiting after roux-en-y gastric bypass (RYGB) due to entrapment of food in the blind limb of the gastro-jejunal anastomosis. Surgical resection of the blind limb is effective but high-risk in some patients. Herein, we present a novel endoscopic approach for the treatment of candy cane syndrome.

Objectives

Demonstrate feasibility and effectiveness for endoscopic treatment of candy cane syndrome.

Methods

A 40-year-old female with sleeve gastrectomy complicated by stenosis and conversion to RYGB developed persistent vomiting. She underwent laparoscopic reduction of an internal hernia requiring small bowel resection complicated by sepsis and intrabdominal leak treated with resection and recreation of the gastrojejunostomy. Near daily vomiting and post-prandial pain developed. She was found to have an 8 cm blind limb concerning for candy cane syndrome. Upper GI series confirmed contrast accumulation and stasis within a dilated blind limb. With the patient supine, the proximal jejunum including the blind limb was distended with 700mL dilute contrast and methylene blue. Fluoroscopic assessment of the anatomy was undertaken. 0.5mg boluses of glucagon were administered as needed to reduce peristalsis. A linear echoendoscope was introduced into the blind limb and an appropriate target in the roux limb was identified using fluoroscopic and endosonographic guidance. A 15mm x 10mm fully covered lumen apposing metal stent was then advanced transmurally to bridge the limbs of small bowel using electro-surgical current, auto-cut setting at 100 watts, effect 5. The final position of the stent was then assessed fluoroscopically and endoscopically confirming intraluminal placement of the proximal and distal flanges of the stent with the waist bridging the two lumens. Using CO2 insufflation, free communication of gas across the stent was seen.

Results

At 2 month follow up, the patient was tolerating a soft diet with complete resolution of post-prandial vomiting. GCSI score improved from 34 to 12. GI series showed flow across the stent without stasis.

Conclusion

This case demonstrates technical feasibility and clinical effectiveness of EUS guided entero-enterostomy for the treatment of candy cane syndrome.

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SURGICAL MANAGEMENT OF GASTRO-CUTANEOUS FISTULA COMPLICATING LSG

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Background

Laparoscopic Sleeve gastrectomy (LSG), one of the most popular bariatric surgeries in the modern era, was first performed in 1990 as the first of a two-stage operation for BPD-DS. The original indication was in patients with severe obesity (BMI>60) to induce weight loss to undergo the second stage BPD-DS more safely. The complications that can arise in patients following LSG are divided into acute (diagnosed within 30 days after the surgery) and late. Early complications that require rapid management include hemorrhage (intraluminal or extra luminal), leak in the staple line, and abscess formation. Gastro-cutaneous fistula is a rare complication after LSG with incidence of occurrence 1–2%. Most of gastro-cutaneous fistulae do not respond to conservative management and need intervention either surgically or endoscopically.

Objectives

We present a case with history of LSG done 2 months prior to presentation. The case was complicated with postoperative leak that developed a gastrocutaneous fistula diagnosed with upper GI endoscopy and contrast enhanced CT abdomen.

Methods

Conservative management was elected at first and eventually inflammatory markers normalized, antibiotics were no longer needed, and the patient then presented with recurrent attacks of intermittent fevers, vomiting and abdominal pain. On examination, a subcutaneous left upper quadrant swelling was found. An abdominal computed tomography (CT) demonstrated a subcutaneous collection communicating with an intra-abdominal collection extending to the gastric remnant. We went for exploratory laparoscopy aiming at excision of the fistulous track and conversion to RYGB. After finding the fistulous opening, trimming of its edge and close it in running sutures, we did RYGB with 50 cm BP limb length and 50 cm for alimentary limb not aiming for further weight loss.

Results

The patient was admitted in the hospital for 5 days to monitor her vitals as well as to assess her tolerance of fluids. She was discharged then and follow-ups after 2 weeks then 2 months were unremarkable.

Conclusion

There are few papers about gastrocutaneous fistula after sleeve gastrectomy. Failure of non-operative treatment necessitated a more aggressive surgical remedy.

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SURGICAL MANAGEMENT OF POST GB DUMPING WITH INADEQUATE WEIGHT LOSS; INDICATIONS & RULES TO BE RESPECTED

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What is common in our bariatric indications is conversion of restrictive bariatric surgery to malabsorptive one or what is recently approved to be hypo absorptive techniques. But, recently with the orientation and close follow up of patients underwent to hypo absorptive bariatric procedures, many of intractable and medical complications (morbidity) have been issued and reported infrequently which can lead to serious complications if not corrected surgically (intractable Dumping, Sever anemia, Hypoproteinemia, Tertiary hyperparathyroidism and many other metabolic related disorders which considered as intermediate or late sequelae hypo absorptive bariatric surgeries.

This oral & video presentation highlight on the main reason of these morbidities, Conversion of two cases of RYGB and MGB to LSG with respect to steps to avoid any further morbidities.

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SURGICAL TREATMENT OF MARGINAL ULCER AFTER GASTRIC BYPASS

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Background

Marginal ulcer is a late complication after a Roux-n-Y gastric bypass with a reported incidence of 0.6-16%

Objectives

To present a video of surgical treatment with gastrojejunal anastomosis resection and downsizing of the reservoir because of a marginal ulcer after gastric bypass.

Methods

We present the case of a 46 year-old woman with a medical history of laparoscopic cholecystectomy ten years ago and a gastric bypass three years ago. The patient denies consuming drugs or alcohol. In the consultation following the gastric bypass, she complained of a sharp pain in the epigastrium, which worsened at mealtimes. She reported consuming non-steroidal anti-inflammatory drugs (NSAIDs) sporadically.

Results

A gastroscopy was carried out revealing a Forrest Class 3 ulcer in the gastric bypass anastomosis without a gastrogastic fistula. Following this, an esophagogastric transit was carried out showing dilation in the gastric reservoir with a wide cardia tending to remain open. A biopsy was taken to rule out the presence of H Pylory. The patient started treatment with omeprazol for 8 weeks with no success, after which the treatment was changed to a full dose of esomeprazol with sucralfate, prohibiting the consumption of NSAIDs.

Conclusion

After 9 months of treatment, the patient remained symptomatic. Another gastroscopy was carried out, which showed the continued presence of the ulcer, so surgery was performed with gastrojejunal anastomosis resection and downsizing of the reservoir. In the immediate post-operative period, the patient was anaemic with a reduction of 5 points of haemoglobin compared to the previous analysis, requiring emergency surgery where bleeding self-limited bleeding in the gastrojejunal anastomosis was detected. After the second surgery, the patient recovered favourably and was discharged 7 days later.

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SUTURELESS ROUX EN Y GASTRIC BYPASS

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Background

Different surgical techniques have been developed for the gastrojejunostomy (GJS) in laparoscopic Roux-en-Y gastric bypass (LRYGBP) with the anastomosis performed in a circular-stapled, linear-stapled, or totally hand-sewn way. No technique seems superior to the other as no consistent data on weight loss or complication rates were described.

Objectives

This video demonstrates a new technique of Laparoscopic Sutureless Roux-en-Y gastric bypass which was adopted recently at our institute, aiming to reduce intraoperative time spent for hand-sewn anastomosis, and postoperative complications.

Methods

Development of a new technique with conical-shaped pouch creation, linear stapled gastrojejunostomy, and jejunojejunostomy.

Results

Good early results for 100 patients at our institute manifested by a reduction in operative time with mean operative time: 45 min (lowest was 32 min), no leaks, no mortalities, and only 2 cases of Anastomotic stricture.

Conclusions

This newly adopted technique showed better outcomes in terms of operative time and its related complications and post-operative complications.

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TAKEDOWN OF A GASTROGASTRIC FISTULA ASSISTED BY INTRAOPERATIVE ENDOSCOPY

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Background

A Gastrogastric fistula is a known complication following a gastric bypass procedure that results in a communication between the gastric pouch and the remnant stomach. It's etiology usually involves an incomplete division of the stomach, post operative marginal ulcers or anastomotic leaks.

Objective

This video demonstrates the combined surgical management of a gastrogastric fistula using both a laparoscopic and endoscopic approach.

Methods

In the current case, a 33 year old, morbidly obese female, BMI 68.35, underwent laparoscopic Roux-en-Y gastric bypass with unremarkable post-operative period who was progressing well at 1 year follow up with 136 lb weight loss, BMI 47.21. Patient presented approximately 4 years post-operatively with weight recidivism, BMI 53.26, but otherwise asymptomatic. Pre-operative work up included an upper GI series that was unremarkable, with no contrast leak but a patent gastro-jejunal anastomosis. An EGD was significant for chronic communication near gastric pouch staple line to the gastric remnant, consistent with a gastro-gastric (GG) fistula. Subsequently, patient underwent take down of GG fistula, remanant gastrectomy and revision of gastro-jejunostomy.

Results

The patient was discharged on post operative day two. At 1 month follow up a weight loss of 20 pounds was recorded.

Conclusions

It is essential to have a low threshold to consider diagnosis of gastrogastric fistula in patient who underwent RYGB and has subsequent significant weight regain as this may require a revisional operation to resolve symptoms. Pre and intraoperative endoscopy should be always part of the surgeon armamentarium to reach a diagnosis and provide accurate intraoperative identification of the fistula.

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THE BEST WAY TO DEALING WITH A STAPLE MISFIRING DURING BARIATRIC SURGERY

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Background

One Anastomosis gastric bypass (OAGB) has been viewed with skepticism after the failure of the Bold Mason loop. During the past 15 years, a growing number of authors worldwide approved that OAGB is a safe and effective procedure, which appears clearly from the operative outcome and long-term follow-up of consecutive cohort studies of patients who underwent OAGB.

Objectives

We had a female Patient 42 years old with a BMI 51 Kg/m², hypertensive with no other co-morbidities. The decision was One Anastomosis Gastric Bypass.

Methods

During the procedure an accidental staple misfire of the third cartridge during creating the gastric pouch. Two stay sutures were taken at the upper and lower end of the defect, these sutures were used to pulling the defect in the stabler and excising this part of the stomach.

Result

The gaped wound of the stomach was safely excised.

Conclusion

The intraoperative misfiring stapling is a serious technical complication that may be happened; when it happens, correction is mandatory. At the intra-operative tough decisions, keep calm and think with moving fast to avoid more damage.

V-148
THE FLAWLESS GASTRIC BYPASS

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We present a safe and effective model of a Roux-en-Y Gastric Bypass. In this approach, every step is built with precautionary maneuvers intended to minimize the risk of postoperative complications and stimulates incretin secretion. First, we start creating an eight to ten centimeters long pouch, molded over a 32 French tube. This long and narrow pouch stimulates satiety by mechanical gastric distention and by accelerating gastric empty towards the ileum in the beginning of the meal, causing a strong early stimulus to PYY and GLP1 release.

We use selected staplers with three different staple heights to warrant both hemostasia and sealing. But to increase efficiency against staple line disruption, leaks and fistulas, both sides of the stomach (pouch and excluded) are oversewn with invaginating sutures.

After omentum and transverse mesocolon retraction, a 100 cm biliopancreatic limb is measured from the ligament of Treitz and is sutured to the pouch, creating a barrier between the new pouch and the excluded stomach, helping to prevent gastro-gastric fistulas. Before interposition, we attach the mesentery to the mesocolon, closing the Petersen space in a simpler and easier way. This is one of the easiest and most effective alternatives to avoid internal herniation through Petersen's space.

In order to make a single layer gastro-jejunal anastomosis without any metallic staples, and prevent leaks, ulcers and stenosis, we remove the pouch tip with staples and perform a single layer, running suture with a 3-0 PDS. This anastomosis is almost flawless, without tension, foreign bodies and ischemic tissues.

The next step is the transection of the small bowel proximal to the gastroenteric anastomosis and a side-by-side mechanical anastomosis between the biliopancreatic and the alimentary limb, 100 cm distal to its transection. To close other potential internal herniation, we also fix the mesenteric defect with a non-absorbable polypropylene suture.

To complete our procedure in the safest way, we check our anastomosis with a methylene blue test. All trocar sites are visually inspected and closed accordingly if necessary.

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THE POESQUE DILEMMA OF THE REFRACTORY MARGINAL ULCER AFTER REVISIONAL ONE ANASTOMOSIS GASTRIC BYPASS

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Background

One Anastomosis Gastric Bypass (OAGB) is a relatively new bariatric procedure that has gained acceptance worldwide and is endorsed by IFSO and ASMBS. Although it has the advantage of having just one anastomosis, it can harbour severe long-term complications, including marginal ulceration.

Objectives

To demonstrate the operative technique of conversion of OAGB to RYGB in a hostile abdomen.

Methods

We report on a 61-year-old patient who presented with considerable reflux symptoms refractory to maximum medical therapy. She had previously undergone a sleeve gastrectomy that was converted to OAGB after an 8kg weight loss. She was then admitted to an intensive care unit post laparotomy for a perforated marginal ulcer at the anastomosis site. Her continued reflux and recalcitrant marginal ulcer was confirmed by repeat OGD, barium swallow and ph-mannometry. MDT discussion recommended a conversion to RYGB as treatment.

Results

The operation was performed laparoscopically with initial lysis of extensive adhesions involving the small bowel, gastric remnant and gastric pouch. The gastric pouch was dissected off the liver and re-oriented from the initial twisted position. The GJ anastomosis was resected after dissection off the pancreas, gastric remnant and colon. The pouch was transected 5cm from the GOJ. A consensus decision was made to reconstruct using a 150cm BP limb, 100cm alimentary limb and 430cm common channel. A side-side gastrojejunostomy was performed by first making an anterior superior gastrotomy in the proximal gastric pouch and a matching antimesenteric enterotomy of the Roux limb, which was closed with two layers of running sutures. After a successful leak test, a small candy cane was excised. The original GJ anastomosis was also removed from the LUQ port. The Roux limb was measured to 100cm and a side-side entero-enterostomy was performed by making parallel antimesenteric enterotomies and closed with 3-0 sutures.

Conclusion

RYGB is an excellent revisional option post-OAGB that can treat refractory GORD and potentially non-healing gastric ulceration. It is, however, unclear whether OAGB represents a risk factor for marginal ulcer formation compared to the RYGB. Further work is required to examine the rates of marginal ulcer formation post-OAGB compared to RYGB.

V-150
THE TROJAN HORSE: DIFFERENTIAL DIAGNOSES FOR THE OBSTRUCTED JEJUNOJEJUNOSTOMY AFTER ROUX EN Y GASTRIC BYPASS

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Background

Small bowel obstruction (SBO) after a Roux en Y gastric bypass (RYGB) in the long term presents a diagnostic dilemma. The majority of cases are caused by internal hernia, however other rarer causes must be considered. The mainstay of management is usually surgical with limited room for conservative treatments. These cases must be dealt with by surgeons with bariatric experience.

Objectives

To demonstrate a case of SBO at the jejunojejunostomy site affecting the alimentary limb 3 years post RYGB, and its operative management

Methods

We report on a 30-year-old patient who underwent RYGB for severe obesity. Although he achieved significant weight loss without any postoperative issues, he presented with acute abdominal pain on two occasions. CT scan showed SBO secondary to an internal hernia, so he underwent an urgent diagnostic laparoscopy.

Results

We found a normal gastro-jejunal anastomosis with a non-dilated remnant stomach. SBO with transition point was identified proximal to jejunojejunal anastomosis causing twisting of the alimentary limb. The distal 50cm of the alimentary limb was found to be ischaemic but not involving the jejunojejunostomy. At the transition point there was a likely site of ischaemic perforation and a second site of impending perforation. The rest of the small bowel was traced to the terminal ileum and found to be normal. The jejunojejunostomy (JJ) was partially resected and to avoid a stricture, the JJ complex was redone. The alimentary limb was anastomosed to the common channel and the biliopancreatic limb to the alimentary limb. Post-operatively he recovered well and was discharged with no complications.

Conclusion

Small bowel obstruction after a RYGB can be challenging to manage. Although an internal hernia is often the expected cause, other differential diagnosis must be considered. The operative management may require reconstructing the RYGB and should be managed by surgeons who have bariatric surgery experience if possible.

V-151

THIN AND LONG GASTRIC POUCH IN ROUX-EN-Y GASTRIC BYPASS

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Background

In traditional gastric bypass, the length of gastric pouch is usually 5-6 cm. Many patients can not feel the satiety after eating because food flow into alimentary limbs quickly. For the function of food restriction by OAGB and sleeve gastrectomy, we may try to create a longer gastric pouch which may make better weight loss and increase the satiety in Roux-en-Y gastric bypass.

Objective

To increase the satiety and anti-reflux function in gastric bypass.

Methods

Dissection near the second and third branches of the left gastric vessels in lesser curvature side. The gastric pouch is around 10-12 cm.

Results

Patients feel satiety and the food can store in gastric for a longer time.

Conclusion

Thin and long gastric may bring sound weight loss and have a better feeling of food restriction.

V-152
THREE PORT ROBOTIC SLEEVE GASTRECTOMY COMBINED WITH HIATAL HERNIA AND MODIFIED HILL REPAIR

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Introduction

Since 2011 the authors preferred method for laparoscopic sleeve gastrectomy in patients with reflux or suspected or proven hiatal hernia repair has been to combine the sleeve surgery with synchronous hiatal repair and fixation of the oesophagus, analogous to a Hill procedure to the crura to prevent migration of the stomach into the chest. The aim being to prevent late reflux, which typically occurs many years post-surgery. We have previously demonstrated that the method prevents patients from developing objectively measured reflux following LSG and have found the recurrence rate to be 8.7% at a mean of 37 +/- 34 months.

Method

Robotic surgery with the Da Vinci system provides the operating surgeon superior visualisation and articulating instruments that provide the ability to grasp and retract tissues. One issue, however, is that its default settings are to be used in the “vectorisation” method of port placement, rather than the “sectorisation” method which surgeons who operate on the patient’s right side are used too. An advantage of the sectorisation method is the ability to place the camera to the left of the midline with a superior view of the hiatus, unobscured by the liver, falciform and stomach. This video demonstrates the LSG and hiatal repair method using 3 robotic ports (1 x 12 mm, and 2 x 8 mm), with the assistant using the 12 mm port to place sutures and extract the sleeve specimen. The patient was a BMI 39 54 year old female with lipedema and arthritis, console time was 47 minutes. No intra-operative or post operative complications occurred, and the patient remains free of reflux symptoms.

Conclusion

Reduced port bariatric surgery is practical and effective. With the extra articulation provided by the robotic platform, complex procedures can be undertaken without compromising safety or efficacy.

High-resolution impedance manometry and 24-hour multichannel intraluminal impedance with pH testing before and after sleeve gastrectomy: de novo reflux in a prospective series. *Surg Obes Relat Dis* (2020) doi:10.1016/j.soard.2020.09.030.

Impact of bariatric surgery on the efficacy of hiatal hernia repair. *IFSO-APC 2019 Abstracts. OBES SURG* 29 (Suppl 3), 111–307 (2019). <https://doi.org/10.1007/s11695-019-03899-0>.

V-153

THROUGH THE LOOKING GLASS OF BARIATRIC TOURISM: SURGICAL MANAGEMENT OF STRICTURES POST SLEEVE GASTRECTOMY

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Background

Medical tourism is an expanding industry with complex socio-economic and ethical issues, namely interruptions in patient care due to involvement of distinct healthcare providers. This case highlights the difficulties in care discontinuity and the importance of accurate information sharing between healthcare providers in situations of medical tourism.

Objectives

To discuss the operative management of symptomatic strictures following laparoscopic sleeve gastrectomy.

Methods

We report on a 29-year-old patient who underwent a gastric band insertion in 2019. Although she was awaiting a RYGB with our team, she opted for a sleeve gastrectomy in November 2022. In January 2023, she presented with severe vomiting and absolute dysphagia. An OGD revealed a large fundal remnant contributing to functional hold up. Barium swallow demonstrated significant reflux. She was optimised with naso-jejunal feeding prior to an elective surgical revision to RYGB.

Results

The patient underwent laparoscopic partial gastrectomy of proximal sleeve stricture and conversion to RYGB. After extensive adhesiolysis involving the previous sleeve, we identified the point of holdup due to the stricture where the band had been placed. Given its locations, we decided to perform a limited gastrectomy. After careful dissection of the angle of His, we created a window in the lesser omentum along the lesser curve until 5cm inferior to the GOJ. We transected the stomach distally and then dissected cephalad, dividing proximal to the stricture, leaving a small gastric pouch. A tension free side-to-side gastrojejunostomy was constructed. We then performed a side-to-side entero-enterostomy by stapling the biliopancreatic limb to the Roux limb at the 100cm mark. The patient made a good recovery post operatively and could tolerate free fluids on discharge. On follow up she continued to tolerate soft diet.

Conclusion

We highlight issues of discontinuity in care that are augmented in the context of post-operative complications in bariatric tourism, and pose significant operative challenges that require bariatric surgeon expertise.

V-154
TIP AND TRICKS: ROBOTIC ROUX-EN-Y GASTRIC BYPASS

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Background

Robotic gastric bypass (robotic Roux-en- Y gastric bypass, R-RYGBP) has been adopted in some centers on the basis of large retrospective studies. In view of some data showing higher morbidity and higher costs, some authors have considered that robotic gastric bypass may no longer be justified with the existing system. An important issue is the heterogenous procedures mixing laparoscopic and robotic approach in the same procedure and the lack of a really standardization

Objective

The aim of this video was to show a standardized and reproducible R-RYGB procedure.

Methods

This video shows step by step a totally robotic Roux-en-Y gastric bypass in a female patient presenting BMI 43 kg/m².

Results

The patient was positioned supine with both legs in abduction. The robotic cart was placed above the patient's left shoulder and the first assistant was positioned between the patient's legs. First step was laparoscopic 75cm biliary limb measurement, it was marked. Gastric pouch was fashioned using laparoscopic robotized suture. A hand-sewn gastro-jejunal anastomosis was performed (two semicircumference posterior to anterior and a second sero-serosal layer) . 120cm alimentary limb was measured and laparoscopic suture was used to perform the jejuno-jejunal anastomosis. Small bowel was divided between the two anastomoses according to the double loop technique. No drain and no nasogastric tube were left in place at the end of operation.

Conclusion

R-RYGB was feasible and reproducible in a setting of learning curve.

V-155

TOTAL GASTRECTOMY FOR GASTRIC CANCER TREATMENT AFTER SINGLE ANASTOMOSIS SLEEVE-JEJUNAL BYPASS – A VIDEO REPORTAlireza Khalaj ⁽¹⁾ - Rahmatullah Athar ⁽²⁾ - Shahab Shahabi ⁽²⁾*Shahed University of Medical Science, Tehran, Islamic Republic of Iran ⁽¹⁾ - Iran University Medical Science, Minimal Invasive Surgery Research Center, Tehran, Islamic Republic of Iran ⁽²⁾***Background**

In addition to standard and completely approved procedures, there are some investigational procedures to address special situations. One of these bariatric surgical procedures is the single anastomosis jejunal bypass (SASJ), which firstly was introduced by Pazouki and Kermansaravi [1], that is a modification of single anastomosis sleeve ileal bypass (SASI) as a combined bariatric and metabolic surgical technique, to decrease the incidence of nutritional deficiencies and excessive weight loss. Although, this technique is relatively new, and little is known about the efficacy and safety of SASJ. [2] Obesity is a significant risk factor for cancer incidence and mortality. The number of patients with obesity who undergone bariatric surgery is increasing; however, the impact of bariatric surgical procedures on the risk of cancer is not completely understood yet. The association between obesity and malignancies has been identified epidemiologically. [3] Unfortunately, nonspecific presentations and difficulties regarding investigations make diagnosis challenging. [4]

Objective

A 62-year-old female with an initial BMI of 44.2 kg/m² were undergone SASJ, 6 years ago, in another center. The upper gastrointestinal endoscopy before SASJ operation showed reflux esophagitis grade A and erosive erythematous hyperemic mucosa gastritis. There were no pathological examination. However, the patient received adequate weight loss for 5 years post-operative, she continued to weight loss during past one year and had a BMI of 21kg/m² at the time of admission.

Methods

According to the patient's complains of heart burn, anorexia, nausea and vomiting she underwent an endoscopy that reported active and focally ulcerative mucosa in antrum with some atypical cells with signet ring type adenocarcinoma and chronic inflammatory responses in pathologic assessment. Metastasis work-up were negative and laboratory findings was normal. Laparoscopic total gastrectomy and Roux-en Y esophagojejunostomy with 75cm BPL and 75cm alimentary limb were performed.

Results

There were no intraoperative or postoperative complications. The patient had an uneventful postoperative course and was discharged on postoperative day 8, post-operative pathology report shows, stage: (PT1 NO Mx), ICDO: M-8140/3, C-16.9.

Conclusion

Laparoscopic total gastrectomy with remove of all lymph nodes from gastric stations is performed prior to the chemoradiotherapy for reaching the purpose of early malignancy controlling workup.

V-156
TOTALLY ROBOTIC DISTALIZATION OF ROUX-EN-Y GASTRIC BYPASS (RYGB) FOR WEIGHT REGAIN

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Background

Bariatric metabolic surgery patients can sometimes have great difficulty controlling their weight long-term, and some struggle with excessive hunger. In selected patients, distalization procedures can provide improved weight control via increased metabolic power and reduced hunger. Due to the variety of RYGB anatomy and methodology encountered, the robotic platform can afford advantages in many of these procedures due to its stable 3-D vision, multi-arm control, enhanced dexterity and ergonomics, all of which can improve the surgeon's performance, reduce surgeon fatigue and increase surgeon stamina.

Objective

To describe our technique in totally robotic distalization of a RYGB for weight regain.

Methods

This is a 39 yo female who had previously undergone a laparoscopic RYGB in 2010. She had reduced her BMI from 66 to 32 with that operation, but over the years had regained significant weight. At the time of our revision, her BMI was 49.7, and she had hypertension and hyperlipidemia. Esophago-gastro-duodenoscopy demonstrated normal RYGB anatomy with an appropriately sized gastric pouch and gastrojejunostomy. A da Vinci Xi robotic platform (Intuitive Surgical, Sunnyvale, CA, USA) was used to measure the limb lengths and revise her RYGB to a long limbed RYGB, with a 100cm Roux limb and a 350cm Total Alimentary Length.

Results

The RYGB was successfully distalized to a long-limbed RYGB. The patient tolerated the procedure and recovered well.

Conclusion

A distalization of a RYGB can afford well-selected patients increased metabolic power and improved control of hunger. This video demonstrates our robotic technique in the performance of this revisional bariatric operation.

V-157

TRANSIT BIPARTITION SURGERY BY LAPAROSCOPY: ILLUSTRATION OF A CASE

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Background

This is a 51-year-old patient with grade III obesity (weight: 147Kg, height: 175cm and BMI: 48Kg/m²). His obesity was complicated by sleep apnea. The preoperative assessment didn't reveal any anatomical variation or functional digestive disorder. The surgical indication of bipartition of the transit was validated in an interdisciplinary consultation meeting.

Method

The patient is positioned in French position and in proclivity. The trocars are positioned as follows: 3 trocars (10mm) in the hypochondria and supra umbilical and 2 trocars (5mm) in the right sub costal and left flank. The procedure starts with a sleeve gastrectomy. The stomach, after a gastrolisis of the greater curvature, is sectioned on a 39Fr calibration probe 6cm from the pylorus. A leak test to ensure the integrity of our resection. The terminal ileum is located and measured at 150cm from the Bauhin valve, then clipped to the site of the future jejunojejunal anastomosis. The small intestine is unrolled 100cm upstream of the clips, which will be the site of our alimentary limb. The biliopancreatic limb is clipped. The alimentary limb is ascended to the stomach so that our gastrojejunal anastomosis is performed without tension. The biliopancreatic limb is sectioned. The loop foot is made 1.5 m from the ileocecal valve. The intermesenteric gap is closed.

Results

The postoperative course was simple and the patient was discharged from hospital on the second day. The long-term follow-up of this patient showed a weight loss of 81 kg, bringing his current weight to 66 kg. Impedancemetry showed a significant decrease in body fat index (15 kg/m²). The patient showed a significant improvement in his sleep apnea. On the other hand, an asymptomatic oesophagitis was noted at the 1-year follow-up fibroscopy.

Conclusion

This procedure, described by Santoro in 2006, is based on the principle of early satiety through the early arrival of the food bolus in the distal part of the ileum, increasing the secretion of digestive hormones (GLP-1, PYY). The data in the literature are limited but show a reduction in weight and a lesser impact on postoperative malnutrition.

V-158
TRANSUMBILICAL SLEEVE GASTRECTOMY WITH AN ACCESSORY LATERAL PORT

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Background

Each year, bariatric surgery becomes a more popular treatment for obesity and type 2 diabetes mellitus (DM2), worldwide the number of surgeries performed has increased from 220,000 per year in 2008-2009 to 833,000 in the 2019. In Mexico, bariatric surgery is very popular. The most performed bariatric procedure is the gastric sleeve, which can be performed using different techniques. Its performance through a previous scar (umbilicus) has shown interest in the surgical community since the incision remains almost covered.

Objective

To report a case of transumbilical sleeve gastrectomy with accessory lateral port on a patient with 54 BMI.

Methods

We present the case of a 22 year old female with a body weight previous to surgery of 149 kg, height of 165 cm a Body Mass Index (BMI) of 54, ideal body weight of 61.25 kg, excess weight percentage of 143%, co morbidities of hepatic steatosis. Laboratory results: hemoglobin A1c 5.4%, White blood cells $7.7 \times 10^3/\mu\text{L}$, Hemoglobin 14.3 g/dL, Plateletes $251 \times 10^3/\mu\text{L}$, Glucose 102 mg/dl, Creatinine 0.58 mg/dl. The patient was prepared for the OR, during the procedure a transumbilical incision is made to insert the single port device, then a 5 mm lateral port is made, pneumoperitoneum is carried to 13 mmHg, then the greater curvature is dissected in all its extension, when reaching the short gastric vessels the exposure must be precise, then a 36 fr Bougie is inserted, a stapler device with purple tristaple for the gastrectomy, hemostasis is achieved with titanium clips along the stapled line. A blake drainage is inserted and positioned along the staple line and extracted through the accessory port. Surgery time was of 86 minutes.

Results

The patient was discharged on 2nd postoperative day and drainage retired on discharge. At 6th month revision the patient had an 80% excess weight.

Conclusions

Transumbilical sleeve gastrectomy with an accessory lateral port is a feasible procedure that seems non inferior to conventional sleeve gastrectomy, offering the patient less incisions and the possibility of using a native scar (umbilicus) for the working port.

V-159

TRIPLE REDO HIATAL HERNIA REPAIR WITH BILATERAL VAGOTOMY: RYGB REVISION FOR PENETRATING ULCER

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Background

The treatment of gastro-jejunal (G-J) ulceration after Roux-en-Y gastric bypass (RYGB) is multimodal, with surgical revision being the ultimate therapy. Revision of RYGB anatomy, specifically at the G-J junction, is the surgical procedure of choice. A vagotomy could potentially be added to further mitigate the risks of re-ulceration.

Objectives

To show that G-J revision with vagotomy is a feasible and effective option for patients with refractory ulcers.

Methods

A 52-year-old female with an initial history of laparoscopic gastric banding that was subsequently converted into a sleeve gastrectomy first and then a Roux-en-Y gastric bypass presenting with recurrent ulcers that failed endoscopic and medical management. The patient also had a hiatal hernia repair during each one of these surgeries. She was thus offered a G-J resection and reconstruction. At the time of the surgery, she was also offered a vagotomy in an attempt to minimize recurrence risk and avoid a potential reoperation in such a hostile abdomen.

Results

The patient had an uneventful hospital stay and was discharged on postoperative day 1. On 3-week follow-up, the patient had no complaints. EGD performed on 6-month follow-up confirmed the absence of any ulcer recurrence at the G-J.

Conclusion

G-J resection with vagotomy is a feasible option in patients with recurrent ulcers that could possibly mitigate the risk of recurrence in RYGB patients.

V-160
TWO INTERNAL HERNIAS IN A PATIENT WITH A PRIOR LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS: A CASE REPORT

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Background

A 56-year-old female with a past medical history of anal squamous cell carcinoma, gastroesophageal reflux disease and mucosa-associated lymphoid tissue lymphoma presented to the Emergency Department (ED) with four days of postprandial intermittent cramping lower abdominal pain associated with nausea and abdominal distention. She underwent uneventful laparoscopic Roux-en-Y gastric bypass two years prior, resulting in a 110-pound weight loss, and abdominoplasty five months prior to symptom onset. Computerized Tomography (CT) scan demonstrated mesenteric edema and swirling at the jejunojunostomy anastomosis, consistent with an internal hernia causing a small bowel obstruction. A second internal hernia was observed through Petersen's defect, the potential space created after a gastrojejunostomy between the transverse colon and the mesentery of the roux limb.

Objectives

We aim to highlight internal hernia as a rare but clinically significant post-operative complication of bariatric surgery. Prompt recognition and treatment is important to prevent small bowel obstruction and/or irreversible bowel necrosis; however, the nonspecific symptoms and subtle radiographic findings pose diagnostic challenges in the absence of a high clinical suspicion.

Methods

After presenting to the ED, the patient underwent diagnostic laparoscopy with laparoscopic repair of both internal hernias and closure of the space at Petersen's defect.

Results

The patient tolerated the procedure well, recovered without complications, and was discharged later that day. When seen in clinic seven months after hernia repair, she had maintained bariatric weight loss and continued to do well.

Conclusion

While CT is helpful in detecting anastomotic leaks, abscesses and stenosis, radiographic findings suggestive of internal hernias are more subtle, including the characteristic "mesenteric swirl." Internal hernias are more common after laparoscopic procedures, as compared to open ones, because there are fewer resulting adhesions to tether and prevent small bowel loops from herniating. Internal hernias should be considered in patients presenting with nonspecific findings such as postprandial abdominal pain, nausea and emesis, prompting CT imaging and diagnostic laparoscopy. Given the subtle radiographic findings, made more difficult to interpret due to altered internal anatomy in patients post bariatric surgery, a high index of suspicion is key in ruling out this life-threatening condition.

V-161

UNDO OF VBG FOR SEVERE REFLUX SYMPTOMS AND BARRET'S ESOPHAGUS

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Introduction

Vertical banded gastroplasty (VBG), also known as stomach stapling, is one of restrictive techniques for managing obesity. The VBG procedure involves using a band and staples to create a small stomach pouch. In the bottom of the pouch is an approximate one-centimeter stoma through which the pouch contents can flow into the remainder of the stomach. Disadvantages of this technique include weight regain because of the fibrosis around the band so the patients begin to avoid the discomfort associated with consuming “healthier” foods, and start eating more easily passed “junk” foods and sweets. Vomiting, reflux symptoms, dysphagia and severe discomfort usually happen especially if food is not properly chewed or if food is eaten too quickly.

Objectives

We present here a case of 48 years old woman, underwent VBG operation in 2010 for morbid obesity class II. The patient presented to our facility with severe typical and atypical reflux symptoms, generalized fatigue and vomiting. Laparoscopic revisional surgery was done.

Methods

Laboratory and imaging investigations was done revealed anemia (Hb 5.6 g/dl, corrected) with upper GI endoscopy showed large hiatus hernia 10 cm with irregular friable mucosa easily bleed on touch, gastric sac divided into 2 compartments with tight stricture in between confirmed by MSCT volumetry. Laparoscopic adhesiolysis was done, dissection of the hiatus hernia, identification of the oesophagus, dilated gastric pouch anteriorly (~950-1000cc by CT) connected to the remaining part of the stomach posteriorly through a narrow stoma located 2 cm from the GEJ with tough mesh around the stoma. Gastrogastrostomy was done.

Results

The patient was discharged POD2, following uneventful recovery on clear fluids, full fluids, soft diet, and regular diet each one for 5 days respectively. The patient was put on nutritional plan including the diet plan, supplements and multivitamins needed for him. Follow up monthly was done revealed significant improvement of the reflux symptoms, no attacks of vomiting. The patient will be for upper GI endoscopy after 3 months.

Conclusion

Vertical banded gastroplasty (VBG) is one of the abandoned restrictive techniques for managing obesity for its complications and unhealthy lifestyle.

V-162
UNPLANNED AMBULATORY ROBOTIC SASI

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Background

Sleeve Gastrectomy (SG) is commonly performed for severe obesity worldwide and offers good results but has its shares of failures. Bilio-pancreatic diversion such as Single Anastomosis Duodeno-ileal bypass (SADIs) is an option for weight regain after SG.

Objectives

This video case-report demonstrates the challenges faced during a 2nd-stage SADI. It showcases the surgical techniques used and intraoperative decision-making in case of unforeseen.

Methods

A 50yo female patient who underwent SG in 2010, returned with weight regain (initial BMI: 39kg/m²). She qualified for an outpatient 2nd-stage SADI (preoperative BMI of 38kg/m² no associated comorbidities). Initially, laparoscopic measurement of the common channel was performed at a distance of 2m50 from the caecum, and subsequently, the robot was docked from this point. During the retroduodenal dissection, severe pancreaticoduodenal adhesions and protuberant posterior duodenal wall made it difficult to maintain anatomical landmarks and unfortunately, a duodenal perforation, was created near the papilla.

Results

Due to limited access to endoscopy in the ambulatory center, the location of the perforation, and the complexity of the dissection, the decision was made to switch to a Single Anastomosis Stomach-Ileal bypass (SASI). Moreover, the patient reported no GERD and had a normal preoperative EGD. The perforation was repaired primarily, an antireflux anchoring of the afferent limb in the antrum was established, and the Stomach-Ileal anastomosis was performed at 2m50 from the caecum. A leak test was finally performed, and an intraabdominal drain was placed. The postoperative course was uneventful, and she was discharged the same day. The drain was removed at PO day7. At 1 PO month, her BMI was 34.4 kg/m², with no dysphagia or diarrhea and only occasional nocturnal reflux.

Conclusion

In conclusion, this video case-report underscores the importance of intraoperative decision-making. If SADI cannot be performed safely, and the patient does not exhibit any signs of GERD, along with a normal preoperative upper GI study, SASI can be considered as a viable alternative.

V-163

UNUSUAL FINDING OF GASTRIC TUMOR DURING BARIATRIC SURGERY

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Background

Obesity has increased in laparoscopic bariatric surgeries worldwide. Incidental pathology can be found during surgery or after specimen pathology. The annual incidence of gastrointestinal stromal tumors (GIST) is higher in obese patients undergoing bariatric surgery (0.6–0.8%) compared with the general population and usually asymptomatic. Preoperative upper gastrointestinal endoscopy is the most frequently used method to determine the presence of gastric abnormalities but some lesions could pass without diagnosis. Notwithstanding, evidence to decide how to proceed during bariatric surgery is still scarce.

Objective

To describe a clinical case where we found an incidental lesser curve tumor during a programmed obesity surgery.

Methods

Video clinical case.

Results

We present a case of a 56 years-old female with history of obesity, arterial hypertension, SAHOS, c-section, and hysterectomy who was programmed for a vertical sleeve gastrectomy. During laparoscopic abdominal review a lesser curvature a mass of approximately 4 x 6 cm was documented. Roux en Y gastric bypass was performed, guaranteeing complete mass resection. Surgery time was 150 minutes, and blood loss of 100 ml with no intraoperative complications. The in-hospital stay was 3 days, uneventful. No complications. 1, 3 and 6 months follow-up were completed without complications.

Conclusion

GIST diagnosis in Bariatric and metabolic surgery patients can be challenging. Systematic review of abdominal cavity should be considered cornerstone in each procedure.

Keywords: Obesity, Gastric Bypass, Sleeve gastrectomy, Hiatal Hernia, Endoscopy, Incidental Tumor.

V-164

URGENT GASTRIC BY-PASS TO TREAT GASTRIC PERFORATION AFTER ENDO-SLEEVE TECHNIQUE

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Background

Endoscopic treatment of obesity is a field in continuous evolution and an increasing number of techniques are being described over recent years. Even these are an example of minimally invasive procedures, they are not exempted of complications.

Objectives

To show one of the possible immediate complications following an endoscopic procedure (Endosleeve technique) and to emphasize the challenge of its diagnosis and management.

Methods

We present a case of a 33-year-old woman who attended the emergency department 12 hours after undergoing a gastric *Endo-sleeve* procedure. In this video, the diagnostic procedure and the performed surgery is presented.

Results

The patient referred intense abdominal pain since the procedure, fever and tachycardia. She presented abdominal tenderness in the upper abdomen with signs of localised peritonitis. In the presence of elevated infectious-inflammatory parameters, an urgent CT scan was performed. It showed a 5 mm perforation in anterior gastric wall, pneumomediastinum, pneumoperitoneum and free peritoneal liquid. Considering the findings, the patient underwent urgent surgery. Through laparoscopic approach, we found that the stomach was held to the anterior abdominal wall because of Endosleeve's transmural stitches, which engaged the peritoneum of the anterior abdominal wall. This resulted in gastric anterior wall perforation, partial necrosis of gastric wall and seropurulent peritonitis in the upper hemi-abdomen. The stomach was very destructured in relation to the previous technique. Simple suture or gastric sleeve were not considered and we decided to convert to Roux-n-Y Gastric Bypass (RYGB). RYGB was performed with resection of excluded stomach. The postoperative course was uneventful and the patient was discharged on the 10th postoperative day.

Conclusions

Diagnosis can be challenging as pneumoperitoneum and pneumomediastinum in the first hours after the procedure are common. Therefore, gastric perforation should be included in the differential diagnosis, as secondary peritonitis may be life-threatening and urgent surgical revision will be necessary. The morbidity associated with endoscopic techniques is still unknown, as well as the long-term weight loss.

V-165

USE OF FLUORESCENCE GUIDED GASTRIC CALIBRATION TUBE TO IMPROVE VISUALIZATION DURING SLEEVE GASTRECTOMY & GASTRIC BYPASS

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Introduction

Fluorescence guided (FG) surgery uses a near infrared emitting dye or light source to improve intraoperative visualization. This case series describes the first in human clinical trial of a novel FG gastric calibration tube used during Bariatric surgery.

Methods

Twenty participants underwent laparoscopic sleeve gastrectomy & two participants underwent Laparoscopic gastric bypass using the Endolumik FG gastric calibration tube. The single-use device was used to evacuate gastric contents, calibrate the gastric sleeve or create the gastric pouch and test for leak under near-infrared (NIR) fluorescence guidance. Surgical & anesthesia providers completed a survey to rate their experience using the novel device.

Results

NIR fluorescence guidance enabled improved visualization of the calibration tube for the surgical team during the operative steps of decompressing the stomach, constructing the gastric sleeve, and performing leak testing. No significant adverse events occurred. One hundred percent of surgical team members rated their overall experience using a FG device compared to the standard bougie as good or very good, and rated visualization while constructing a gastric sleeve as good, or very good. Additionally, 90% of the surgical providers were confident or very confident that the FG device facilitated construction of a consistent sized gastric sleeve & gastric pouch. The average likelihood to recommend this device to a colleague was 9.1 out of 10.

Conclusion

FG tools can improve visualization during bariatric surgery, however further study is warranted to determine if these tools can improve surgical outcomes.

V-166
VIDEO CASE REPORT: HEPATIC ABSCESS AFTER OAGB

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Clinical Presentation

This is a case report of a 54 year old woman, undergoing OAGB on 5th of May in obesity class III (168cm, 122kg, BMI 43.2kg/m²) and EOSS 2 (hypertension, type 2 diabetes mellitus, sleep apnea syndrome in treatment with C-PAP, chronic obstructive pulmonary disease in chronic corticosteroid therapy, NAFLD). Patient discharged on POD 2 and 1 week Follow-Up was regular. On June 17th, 2022, the patient presented in our Emergency Department, due to abdominal pain and fever. Laboratory Assessment showed a neutrophilic leukocytosis (WBC: 15*10³/UL), a high PCR (350 MG/DL), and an acute renal failure (CREAT: 2,5 MG/DL); so we did a CT ABDOMEN without contrast that showed a hepatic abscess. We suspected a fistula.

Operative Procedure

We performed laparoscopy and found a purulent fluid that we analyzed. The culture was positive for *Enterobacter Cloacae* which was sensitive to meropenem and ciprofloxacin. We drained the abscess, mobilized the left lobe of the liver and tested the gastro-jejunal anastomosis with methylene blue in suspected fistula. The test was negative. So we did the same thing with the gastric remnant and also in this case the test was negative for fistula. After extended lavage, we put two abdominal drains to finish surgery.

Post-Operative Outcome

After surgery, The patient stayed under antibiotic therapy in the Intensive Care Unit and returned to the department on POD 2 and started a liquid diet. Discharge was on POD 10. One week, 3 and 6 months follow-up showed a regular postoperative course.

Conclusion

During primary surgery, the liver retractor caused a hematoma of the liver, so we supposed that there was a migration of gastrointestinal bacteria while we performed the gastrojejunal anastomosis. Since the patient was immunosuppressed, these bacteria caused an infection of the hematoma, which created the abscess.

V-167

WEIGHT GAIN DUE TO GASTRO-GASTRIC FISTULA AFTER ROUX-EN-Y GASTRIC BYPASS

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Background

Gastro-gastric fistula (GGF) is defined as the connection between the gastric pouch and the gastric remnant. It usually presents with symptoms of gastroesophageal reflux, marginal ulcers, food intolerance as well as insufficient weight loss or weight regain.

Objectives

We present our experience with a case of GGF.

Methods

48-year-old female patient with a history of Roux-en-Y Gastric Bypass (RYGBP) 15 years ago by laparotomy performed in another institution. Among her illnesses she presented indeterminate collagenopathy and depression, medicated with hydroxychloroquine, sertraline and zolpidem. Her weight before RYGBP was 116 kg, with a body mass index (BMI) of 46 kg/m². Her minimum post- RYGBP weight was 63 kg (BMI 25 kg/m²) at 12 months, without long-term follow-up. After 14 months postoperatively, she reported progressive weight gain without restriction or satiety. At the time of consultation, she had a BMI of 40 kg/m². An upper gastrointestinal (GI) endoscopy and an upper gastrointestinal (GI) series were requested, showing an enlarged gastric pouch, dilated gastrojejunal anastomosis and a large gastro-gastric fistula at the cardia level. Progress was made with the endoscope through the fistula, reaching the gastric remnant without pathological findings. The patient started medical treatment with a multidisciplinary team. Laparoscopic revision surgery was decided. Multiple firm adhesions, a large gastric pouch, and the presence of a GGF at the fundus level, without evidence of mechanical suture staples at that level, with a long afferent loop were found. Lateral section of the gastric pouch with a calibration bougie, resection of the GGF, resection of the afferent loop and reduction of the diameter of the gastrojejunal anastomosis were carried out. Surgical time was 80 minutes.

Results

There were no complications and the patient was discharged 48 hours after surgery. She is currently in her 13th post-operative month with a BMI of 25 Kg/m², reporting adequate food restriction and satiety with improvement in her quality of life.

Conclusion

In patients with insufficient weight loss or weight gain, it is recommended to perform complementary studies to rule out the presence of anatomical factors that could cause this condition.

V-168
WILKIE SYNDROME AFTER GASTRIC BYPASS. HOW TO SUSPECT IT?

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Background

Aortomesenteric clamp syndrome is a rare cause of proximal intestinal obstruction. Risk factors include extreme weight loss. Cases secondary to bariatric surgery such as vertical gastrectomy or gastric bypass have been described in the literature.

Objectives

Diagnosis in patients undergoing gastric bypass surgery is challenging, as the clinical manifestations are non-specific, unrelated to ingestion and behave like a biliopancreatic loop syndrome.

Methods and Results

Female patient aged 52 years diagnosed with severe obesity (BMI 44.5). Her medical history included diabetes mellitus under treatment with oral antidiabetic drugs and surgery for GERD by Nissen fundoplication in 2015. After completing the study, a proximal gastric bypass was performed. During the patient's follow-up at 8 months (weight loss of 49 kg, 97,2% excess weight loss), symptoms of non-specific abdominal pain appeared, not always related to ingestion. Complementary tests are performed, highlighting the results of the abdominal CT scan and MRCP: dilated gastric remnant and duodenum. Ectatic gall bladder and bile duct. Angulation between SMA and abdominal Aorta was 19.83°. Exploratory laparoscopy was performed. Intraoperative findings: dilated remaining stomach and 4-5 cm dilated duodenum up to the Treitz angle, from which the calibre was restored to normal. It was therefore decided to perform a wide mobilisation of the duodenum and a laterolateral transmesocolic duodenojejunal anastomosis with the common loop, and cholecystectomy. The patient was discharged on the sixth postoperative day without complications. During the subsequent 17-month follow-up, the patient regained 2 kg (BMI 26) and showed an absence of clinical manifestations.

Conclusions

It is remarkable how few cases have been reported in the literature, which should make us reflect on whether this pathology is underestimated due to the insidious clinical presentation. We must differentiate between two pictures: 1. After restrictive surgery (vertical gastrectomy), since the clinical picture will be similar to that of non-operated patients. 2. Following bypass surgery, where duodenal obstruction will be shown as an obstruction of the biliopancreatic loop. This is a key point because we must make the differential diagnosis with internal hernias, loop foot stenosis, bridles, etc.

E-POSTER ABSTRACTS

P-1
10-Y RESULTS OF LAPAROSCOPIC SLEEVE GASTRECTOMY IN YOUNG PATIENTS(<25 YO) WITH SEVERE OBESITY: A SINGLE-INSTITUTION EXPERIENCE

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Background

Obesity in adolescents and young adults has risen at an alarming rate. Numerous studies have demonstrated that bariatric surgery is effective to tackle obesity, but homogeneous series of young patients (< 25 yo) are scantily reported. The aim of our study was to present and discuss our experience with laparoscopic sleeve gastrectomy (LSG) in young patients treated at our Institution.

Methods

Young obese patients submitted to LSG from January 2013 to February 2023 were included in this study. Prospectively collected baseline data included age,gender,height,weight,body mass index(BMI),previous bariatric intervention and comorbidities. Postoperative data included length of stay, hemoglobin values in post operative course (POD 1 and at discharge),need for reoperation,% EWL and body mass index at 3-month intervals.

Results

One hundred and six young patients (<25-yo) underwent LSG. There were 90 females and 16 males. The mean age was 21.9 ± 2.3 years, the mean preoperative weight and BMI were 130 ± 20.9 kg and $46,2\pm 5,8$ kg/, respectively. No intraoperative complication was reported. No conversion to open surgery was necessary. Two patients had a staple-line leak that required both a percutaneous drainage and conservative treatment. One patient had a gastrointestinal hemorrhage requiring transfusion and laparoscopic revision. One patients had a gastric sleeve stenosis requiring endoscopic dilations. 7 patients required reoperation for failure and gastroesophageal reflux. Four cases were converted to OAGB due to weight regain, 3 cases to RYGB due to weight regain associated with gastroesophageal reflux. The mean values of hemoglobin on POD1 and at discharge were 13.0 ± 1.3 and 13.0 ± 1.4 mg/dl respectively. The average %EWL at 3, 6, 12, 36, 60 and 120 months were 39 ± 18 , 63 ± 20 , 81 ± 23 , 86 ± 24 , 84 ± 24 and $73\pm 30\%$, respectively.

Conclusions

In our experience, LSG appeared to be safe and effective to achieve durable weight loss in young patients(<25 yo) with morbid obesity. Larger series and longer follow-up are needed to confirm these results.

P-2

2-YEAR OUTCOMES OF THE BPG-1 MULTI-CENTER STUDY. LAPAROSCOPIC GASTRIC BYPASS WITH BILIOPANCREATIC LIMB - ALIMENTARY LIMB 70/150CM VS. 150/70CM

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Introduction

Several published trials show better weight loss and remission of comorbidities with a biliopancreatic limb(BPL) of 150-200cm in the gastric bypass(RYGB). The length of the small bowel(SB) can range from 3 to 9 metres so a short common limb(CL) might produce nutritional deficits.

Objectives

To present the outcomes in 12 and 24 months of a randomized multicenter prospective trial with different lengths of the alimentary limb(AL) and BPL of RYGB to ensure its effects. The influence of the total SB length(TSBL) on them is analyzed as well.

Material and Methods

Multicenter, prospective, block-randomized(1:1) and blinded for the patient trial. Target: patients (BMI 35-50) for RYGB. Statistics: type 1 (AL 150cm and BPL 70cm) or type 2 (AL 70cm and BPL 150cm). Measurement of TSBL in all. Sample size: 80%, alpha level:0.05, 36 patients in each arm. Corrected with 15% of possible losses. Overall: 84 patients. The variables are the percentage of excess weight lost (EWL%) and the remission of diabetes (DM), high blood pressure (HBP), dyslipidemia (DL) and obstructive sleep apnea (OSA) in 6 months, 1, 2 and 5 years. The criteria take into account are the recommendations of the ASMBS, ADA, SECO and AEC.

Results

Both groups are comparable and have not shown statistically significant differences in terms of gender, age, comorbidities and initial BMI. There were no differences in terms of the operation time, the hospital stay or the intraoperative and postoperative complications, either early or late after 30 postoperative days. There were differences in the %EWL, being 79% in type 1 and 87% in type 2 in 12 months; and 76% in type 1 and 88% in type 2 in 24 months. There were no differences about the remission or improvement in the comorbidities either. * Results of some patients are still lacking (by 12 months N=95 and by 24months N=83).

Conclusion

RYGB with a long BPL (150cm) has shown greater weight loss by 12 and 24 months than the short one (70cm). However, a percentage of the sample remains unanalyzed. They were not found statistically significant differences regarding remission or improvement of the comorbidities.

P-3
A BANDED GASTRIC BYPASS STORY: RETROSPECTIVE ANALYSIS OF 300 PATIENTS AT 6 MONTHS, 1, 3, AND 5-YEAR FOLLOW-UP

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Background/Introduction

Banded-Roux-en-Y Gastric Bypass (BRYGB) and its outcomes have been published to a lesser extent. Our study aims to examine outcomes at 6 months, 1, 3, and 5 years, in terms of weight loss and metabolic parameters following BRYGB, in Indian patients with obesity. We wanted to evaluate if the initial weight loss achieved at 6 months and 1 year was sustained at 3 and 5 years following BRYGB and what was the incidence of specific gastric band-related complications.

Objectives

To assess weight loss and metabolic outcomes along with specific band related complications following BRYGB in Indian patients with obesity.

1. Primary outcomes:

- A. Percent total body weight loss (%TWL) and percent excess weight loss (%EWL) at 6 months, 1, 3 and 5-year follow-up
- B. Percent weight regain at 3 and 5 years
- C. Rate of gastric band-related complications

2. Secondary Outcomes:

- A. Improvement in glycemic control, HbA1C, FBS, and lipid profile at 6 months, 1, 3 and 5-year follow-up
- B. Recurrence of comorbidities at 3 and 5 years

Methods

In this single-center retrospective study, after IRB approval, data from patients with obesity who underwent BRYGB with a fixed biliopancreatic limb length on an elective basis (from 2012 – 2020) have been included. All patients have complete demographic and metabolic parameters recorded preoperatively and at 6 months, 1, 3 and 5-year follow-up.

Results

Baseline data that was collected preoperatively has been extracted from the patient data software. Follow-up data on metabolic syndrome remission or worsening, as well as early and late complications, especially gastric band-related complications, has also been recorded. The degree of weight loss has been expressed as percent total body weight loss (%TWL) and percent excess body weight loss (%EWL). Body mass index (BMI) has been recorded before and after surgery at all time points – 6 months, 1, 3 and 5-year follow-up.

Conclusion

Our results help us test the hypothesis that better and more durable weight loss at 3 and 5-year intervals is achieved with the BRYGB, as compared to existing literature on non-banded RYGB, and assess whether the rate of gastric band-related complications is acceptable.

P-4

A CASE OF MALNUTRITION AND WERNICKE'S ENCEPHALOPATHY AFTER BARIATRIC SURGERYDeeba Siddiqui*Indraprastha Apollo Hospital, Department of Minimal Access and Bariatric Surgery, New Delhi, India***Introduction**

To review a case of a 58-year-old woman with malnutrition and Wernicke's encephalopathy after bariatric surgery.

Methods

Written consent from the patient was obtained. The patient's records were analyzed to understand the course and treatment of her diseases, as well as the complications that occurred.

Results

A 58-year-old woman was admitted to a tertiary referral hospital for stroke-like symptoms (changes in speech and mobility, uncontrolled urination, and defecation). Seven years ago, she underwent one anastomosis gastric bypass surgery, which had several postoperative complications, such as staphylococcal sepsis, ileus, intestinal necrosis, and a fistula between the abdominal wall and small intestine. After the surgery, the patient was treated for malnutrition multiple times, both in the nursing home and in the hospital. Regular malnutrition testing with iron, calcium, zinc, copper, vitamins, and electrolytes was performed. Two years later, the patient's lowest weight was achieved (32 kg), and a reconstruction of the gastrointestinal tract was performed with no postoperative complications. After the reconstructive surgery, testing for malnutrition, minerals, electrolytes, and vitamin concentrations was not performed for 3 months. When she was admitted to the hospital for neurological symptoms three months after the reconstructive surgery, diagnostic tests refuted any neurologic disease. Considering the patient's history (bariatric surgery and severe malnutrition) and further testing, which revealed severe multiple vitamin deficiencies (although protein concentration was normal), a diagnosis of Wernicke's encephalopathy was formed.

Conclusion

Patients with a history of bariatric surgery should receive regular check-ups and testing for malnutrition and its complications by multidisciplinary bariatric surgery team, as the risk of malnutrition is much higher than in the general population.

P-5

A CASE OF SUSPECTED DEPRESSION BEFORE BARIATRIC AND METABOLIC SURGERY

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Background

Obesity patients are known to have a high rate of comorbid psychiatric disorders. This time, we report on a case in which a patient who seemed to have no mental disorder at first glance was diagnosed with depression after being referred to a psychiatrist.

Objectives

The case is a 40-year-old woman. Height 156 cm Weight 101.2 kg BMI 41.58. Complications: diabetes mellitus (onset in 2017), proteinuria, bronchial asthma, dyslipidemia, hypertension, and insomnia. In 2018, a doctor introduced diabetes treatment to the Department of Metabolism at our hospital. Blood sugar transition improved immediately after hospitalization. No hormonal abnormalities, secondary obesity was ruled out. After being discharged from the hospital, she continued to visit the outpatient clinic of her previous doctor, but it was extremely difficult to manage her weight. Mazindol use also remained at a body weight of around 100 kg, HbA1c around 10%, and urinary protein around 2.00 g/gCr. Introduction to gastrointestinal surgery for the purpose of bariatric and metabolic surgery. After hospitalization, preoperative weight loss and rehabilitation were performed. Severe obesity diet 1,300 kcal; formula diet provided for lunch. Body weight decreased from 99 kg to 91.1 kg in 17 days. Prehospital diabetes treatment: liraglutide 1.8 mg metformin 2000 mg/day, Canagliflozin 100 mg glargine 5 units, HbA1c 9.6%. Even after glargine was discontinued, blood glucose levels remained around 80 mg/dl before morning and around 100 mg/dl two hours after meals. It was decided not to perform surgery during this hospitalization. However, immediately after discharge from the hospital, the weight deteriorated to around 100 kg and HbA1c to around 10%. Problems: Single mother receiving public assistance. Her daughter didn't fit in with high school and has dropped out. Repeatedly, "My boss wants me to postpone the surgery because there aren't enough people at work".

Methods

Referred to a psychiatrist.

Results

Depression was suspected.

Conclusion

Since the prevalence of psychiatric disorders in bariatric surgery patients is high, a thorough preoperative survey is necessary.

P-6

A CLOSE LOOK ON THE ROLE OF ROUTINE UPPER ENDOSCOPY BEFORE BARIATRIC SURGERY IN THE MIDDLE EAST POPULATION: REVIEW OF 1278 PATIENTS

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Introduction

The routine use of preoperative upper endoscopy for patients undergoing bariatric surgery is controversial. Although many surgeons find it not needed; others still consider it a mandatory tool in preoperative assessment.

Objectives

Our study aims to determine whether upper endoscopy should be routinely implemented before bariatric surgery or not.

Methods

We reviewed the medical records of all patients who had a preoperative endoscopy before bariatric surgery in our unit between January 2013 and June 2016. Patients were divided into 3 groups: Group 0 included patients with normal endoscopy, Group 1 included abnormalities that did not affect the timing or type of procedure (simple gastritis, simple duodenitis and small hiatal hernia), Group 2 included abnormalities that had direct impact on the procedure (Esophagitis and Barrett Esophagus, large hiatal hernia, erosive gastritis or duodenitis, peptic ulcer and mass lesions or cancer).

Results

The files of 1473 patients were reviewed. The endoscopy results were not present in 195 files, they were excluded, and the remaining 1278 files were included. The mean age of patients was 41.3 \pm 12.7 years, 61% were females and 39% were males. The mean BMI was 43.7 \pm 8 kg/m². Endoscopy was normal in 10.5% of patients and abnormal in 89.4%. The most common abnormalities were gastritis, positive Campylobacter-like organism test (CLO test), Gastro-Esophageal Reflux Disease (GERD) with esophagitis and hiatal hernia. Group 0 included 10.5% of patients (n=135), Group 1 included 25.6% of patients (n=327) while Group 2 included 63.8% of patients (n=816).

Conclusion

Routine upper endoscopy seems an important part in the preoperative preparation of patients planned for bariatric surgery in the Middle East population. Further studies or meta-analysis could help in building up clear solid evidence and guidelines that could be approved by international bariatric associations regarding the indication of preoperative upper endoscopy for bariatric patients.

P-7

A COMPARATIVE EVALUATION OF POST-OPERATIVE COMPLICATIONS IN PRIMARY AND REVISION BARIATRIC-METABOLIC SURGERIES IN GIBRALTAR

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Background

In Gibraltar obesity is comparatively prevalent with 28.9% of adults suffering from obesity in 2021¹. As of March 2023, 105 patients have undergone bariatric-metabolic procedures in Gibraltar of which 12 were revision surgeries. There is strong evidence for increased complication rates in revision compared to primary surgery, and it is therefore important to quantify risk in our cohort.

Objectives

The purpose of this study is to quantify the complication rates in revision cases in Gibraltar and compare this with the complications rates of patients undergoing primary surgery.

Methods

The patient cohort was identified: any adult enrolled in the bariatric programme who underwent a revision bariatric-metabolic surgery in Gibraltar. Cases were analysed, the types and frequencies of complications were recorded.

Results

Of the 12 revision surgeries performed, 8 patients experienced a complication, ranging from intermittent abdominal pain (secondary to adhesions), to an internal hernia and retained foreign body. 4 patients experienced abdominal pain more than 30 days post operatively, 3 patients experienced altered bowel habit, 2 had symptoms of dumping syndrome and 1 patient suffered from GORD. There was 1 small bowel obstruction attributed to bezoar. 3 patients originally had POSE procedures, 2 had gastric banding and 6 patients had gastric sleeves. 7 revisions were Roux-en-Y Gastric Bypasses, 4 were one-anastomosis gastric bypasses, and 1 was a gastric sleeve.

Conclusion

Bariatric-metabolic surgeries have significantly higher complication risk in revision compared to primary procedures. Whilst most patients experience minor or no complications, the risk of significant complications and prolonged after effects is still approximately 6 times higher in revision surgery.

1. *Gibraltar (UK)* (no date) *World Obesity Federation Global Obesity Observatory*. Available at: https://data.worldobesity.org/country/gibraltar-uk-78/#data_prevalence (Accessed: March 15, 2023).
2. Brethauer, S.A. et al. (2014) "Systematic review on reoperative bariatric surgery American Society for Metabolic and Bariatric Surgery Revision Task Force", *Surgery for Obesity and Related Diseases*, 10, pp. 952–972. Available at: <https://doi.org/https://doi.org/10.1016/j.soard.2014.02.014>.

P-8

A NARRATIVE INQUIRY INTO THE EXPERIENCE OF UNDERGOING REVISION BARIATRIC SURGERY IN FEMALE PATIENTS

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Background

Bariatric surgery maintains its place in the literature as the most effective method used in the treatment of obesity. As pointed out by studies focusing on long-term results regaining weight after bariatric surgery is an important problem. In this context, the number of revisional surgeries is increasing in patients with weight regain after bariatric surgery. In many studies, it has been reported that the number of female patients undergoing bariatric surgery is higher than the number of male patients. For this reason, it is important to know the revisional bariatric surgery experiences of this population, which is mostly women.

Objectives

In this study, it was aimed to reveal the experiences of women who underwent revisional bariatric surgery.

Methods

This qualitative study was conducted with a narrative inquiry approach and included four female patients who had undergone revisional bariatric surgery and volunteered to participate in the study. Patients were reached by using purposeful sampling and snowball sampling methods. The interviews were conducted face-to-face with a semi-structured interview form prepared by the researchers. Voice recordings were taken during the interviews made with the individual interview method and the recordings were transcribed. Afterward, participant narratives were analyzed.

Results

The average age of the female participants included in the study is 41 (Min:33, Max:50). Sleeve gastrectomy was applied to all participants. The average weight regain time was 3-4 years, and the weight gained could rise up to the preoperative value. The time elapsed after revisional surgery is 1-2 years. As a result of the narrative analysis, the experiences of the participants were themed as the main themes within the framework of three important periods: “before bariatric surgery”, “on the way from bariatric surgery to revision” and “after revision surgery”.

Conclusion

The study presents the patients’ experiences of bariatric surgery and patients’ weight loss journeys with a narrative research method. While the common themes in each patient’s stories illuminate their journey in this process, the differences in their experiences enrich this process and make it unique to them.

Keywords: Bariatric surgery, revisional bariatric surgery, life experiences, narrative inquiry, qualitative study.

P-9

A NOVEL LAPAROSCOPIC ARTICULATING DEVICE FOR LAPAROSCOPIC SLEEVE GASTRECTOMY PLUS DUODENOJEJUNAL BYPASS IN KOREAN OBESE PATIENTS

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Background/Objectives

For surgical treatment of severely obese patients in South Korea, various bariatric surgery options are available; one of the methods has recently gained interest among foregut surgeons: the sleeve gastrectomy combined with a duodenojejunal bypass. (SG-DJB) Also, a new multi degree-of-freedom (DOF) articulating device, the ArtiSential® device (LivsMed, Seongnam, Korea), emerged to assist scrupulous control during laparoscopic surgeries. Here, we present ten cases of utilizing this device for severely obese patients undergoing SG-DJB.

Materials and Methods

Between May 2020 and August 2021, we performed laparoscopic SG-DJB using the laparoscopic articulating instruments, ArtiSential® device (LivsMed, Seongnam, Korea) for ten severely obese patients. We used the ArtiSential dissector for tunneling under the duodenum and the ArtiSential needle-holder for performing duodenojejunal anastomosis.

Results

All operations were successfully completed by laparoscopy. There was one morbidity case, in which the patient underwent the postoperative bleeding from a branch of gastroduodenal artery. There was no mortality.

Conclusion

Even though the operator had no experience in sleeve gastrectomy plus DJB, it was feasible to perform this operation using ArtiSential device. However, to reach the standardization of this procedure, laparoscopic articulating instruments need to be evolved for easy application.

Keywords: Severe obesity; Sleeve gastrectomy plus duodenojejunal anastomosis; Articulating device.

P-10

A NOVEL NOMOGRAM AND ONLINE CALCULATOR FOR PREDICTING THE RISK OF OBESITY HYPOVENTILATION SYNDROME IN BARIATRIC SURGERY CANDIDATES

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Background

Obesity hypoventilation syndrome (OHS) is frequently misdiagnosed and undertreated, increasing the risk of perioperative complications. We aimed to determine the predictors of OHS and to develop and validate a novel nomogram and online calculator for identifying patients at risk of OHS in bariatric surgery candidates.

Methods

We retrospectively analyzed the data of patients undergoing bariatric surgery between March 2017 and June 2020. Predictors were identified using univariate and multivariate analyses to establish the nomogram. The discriminative ability, calibration and clinical value of the nomograms were tested using C-statistics, calibration plots, and decision curve analysis. The nomogram was internally validated using with bootstrap resampling.

Results

A total of 577 patients were enrolled, OHS was presented in 17.9% (103 /577). Body mass index (BMI) (odds ratio [OR], 1.11; 95 % confidence interval (CI), 1.04-1.18; p=0.001), neck circumference (OR, 1.09; 95 % CI, 1.01-1.18; p=0.035), type 2 diabetes (T2D) (OR, 2.02; 95 % CI, 1.17-3.45; p=0.011), serum bicarbonate (OR, 1.47; 95 % CI, 1.30-1.67; P<0.001), C-reactive protein (CRP) (OR, 1.03; 95 % CI, 1.01-1.06; p=0.017) were independent risk factors for OHS and incorporated to develop the nomogram. The nomogram revealed good discrimination, with a C-index of 0.830 (95% CI: 0.784-0.876) (0.8227 through internal validation), and good calibration. Decision curve analysis further confirmed the nomogram's clinical usefulness.

Conclusions

The novel nomogram and online calculator provided an excellent preoperative individualized prediction of OHS in patients undergoing bariatric surgery, hereby potentially assisting clinicians and surgeons in the early detection and intensive monitoring of OHS.

P-11

A NOVEL SOLUBLE MICRONEEDLE FOR INTRAGASTRIC DRUG DELIVERY IN THE TREATMENT OF OBESITY

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Background

Obesity is a global public health problem. Stomach wall delivery of botulinum toxin type A (BTX-A) is a minimally invasive treatment for weight reduction that has received much attention.

Objectives

The conventional intramural delivery of BTX-A is highly randomized, with uneven drug distribution, unclear delivery levels and unstable clinical outcomes. Since microneedles could effectively solve these problems, we designed a novel soluble microneedle carrying BTX-A for obesity treatment.

Methods

Preparation of BTX-A drug-delivery microneedles by 3D printing and validation of their mechanical properties. An obese rat model was constructed by high-fat feeding and randomly divided into control group for PBS delivery, regular needle group and microneedle group for BTX-A delivery. Intraoperatively, bleeding was recorded to assess safety. Postoperatively, food intake and weight changes were recorded to assess the treatment efficacy.

Results

The microneedle exhibited excellent mechanical properties, penetrated the stomach wall effectively and dissolved within 2 minutes for fast drug delivery. Furthermore, the microneedle group showed a significantly lower risk of bleeding ($P < 0.05$) and reduced food intake ($P < 0.05$), compared to the regular needle group. Following this, the microneedle group showed a more pronounced weight reduction, roughly 2.96 times more than the regular needle group ($P < 0.05$).

Conclusion

The novel soluble drug-delivery microneedles enable intragastric delivery of BTX-A safely and uniformly. It increases weight reduction through enhanced inhibition of food intake.

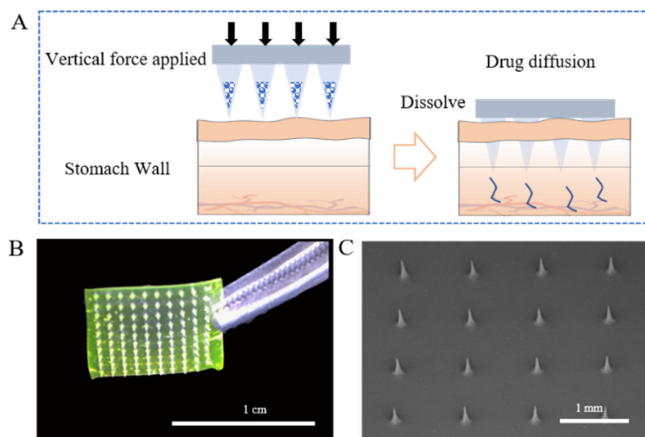


Figure 1: A: Schematic diagram B: Visual and electron microscopy.

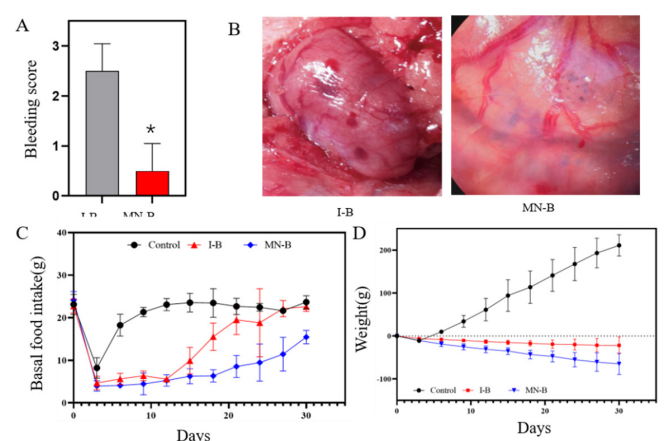


Figure 2: A and B: bleeding in regular needle group and microneedle group. C: Changes in food intake after BTX-A delivery in regular needle group and microneedle group. D: Changes in weigh after BTX-A delivery in regular needle group and microneedle group.

P-12

A PATIENT-TAILORED ADJUSTMENT OF THE ANATOMY IN A PATIENT SUFFERING FROM SEVERE LATE DUMPING AFTER ROUX EN Y GASTRIC BYPASS PERFORMED AFTER PREVIOUS NISSEN FUNDOPLICATION

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Roux-en-Y Gastric Bypass (RYGB) is a safe and effective procedure in the treatment of obesity and its related comorbidities. However, postprandial hyperinsulinemic hypoglycemia (PHH) -best known under the common name of "late dumping" is a well-known long-term complication after this procedure. The management of this situation is challenging and is usually attempted in stages of various severity. These include diet and medications, but results vary. More aggressive management may consist of surgical interventions such as reversal to normal anatomy, or even pancreatectomy. Outcomes however vary and these procedures suffer their own morbidity. We report on a tailor-made reversal of RYGB for late dumping in a debilitated patient with a significant surgical history, that included a fundoplication for severe gastro-esophageal reflux previous to the RYGB.

P-13

A POPULATION-BASED COHORT STUDY ON EFFICACY AND SAFETY OF BARIATRIC SURGERY IN YOUNG ADULTS AGED 18-25 YEARS VERSUS ADULTS AGED 35-55 YEARS

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Background

Bariatric surgery is the most effective treatment for severe obesity in adults and has shown promising results in young adults. Concerns regarding long-term efficacy and complications result in delayed utilization of bariatric surgery in young adults.

Objectives

This study aimed to assess the efficacy and safety of bariatric surgery in young adults compared to adults.

Methods

This is a nationwide population-based cohort study utilizing data from the Dutch Audit Treatment of Obesity (DATO). Young adults (aged 18-25) and adults (aged 35-55) who underwent primary Roux-en-Y gastric bypass (RYGB) or sleeve gastrectomy (SG) were included. Primary outcome was percentage total weight loss (%TWL) until five years postoperatively. Secondary outcomes were incidence of complications and regression of obesity related comorbidities.

Results

A total of 2,822 (10.3%) young adults and 24,497 (89.7%) adults were included. The follow-up rates of the young adults were lower up to five years postoperatively (46.2% versus 56.7% three years after surgery; $p < 0.001$). Young adults who underwent RYGB showed superior %TWL compared to adults until four years postoperatively (33.0 ± 9.4 versus 31.2 ± 8.7 three years after surgery; $p < 0.001$). Young adults who underwent SG showed superior %TWL until five years postoperatively (29.9 ± 10.9 versus 26.2 ± 9.7 three years after surgery; $p < 0.001$). Postoperative complications ≤ 30 days were more prevalent among adults, 5.3% versus 3.5% ($p < 0.001$). No differences were found in the long term complications. Young adults revealed more remission of hypertension (93.6% versus 78.9%), dyslipidemia (84.7% versus 69.2%) and musculoskeletal pain (84.6% versus 72.3%).

Conclusion

Bariatric surgery appears to be at least as safe and effective in young adults as in adults. Based on these findings the reluctance towards bariatric surgery in the younger age group seems unfounded.

P-14

A STANDARD SET OF PATIENT REPORTED OUTCOME MEASURES TO MEASURE QUALITY OF LIFE IN OBESITY TREATMENT RESEARCH: THE S.Q.O.T. INITIATIVE

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Background

The lack of standardization in patient reported outcome measures (PROMs) has made measurement and comparison of quality of life outcomes in obesity treatment research challenging. Previously, consensus was achieved regarding eight patient reported outcomes (PROs) that should be measured in obesity treatment.

Objectives

This study reports on the results of the second and third global multidisciplinary Standardizing Quality of life measures in Obesity Treatment (S.Q.O.T.) consensus meetings, where a consensus standard set of PROMs in obesity treatment research was established.

Methods

The S.Q.O.T. II online and S.Q.O.T. III face-to-face hybrid consensus meetings including people living with obesity (PLWO) were held in October 2021 and May 2022. The meetings were hosted by the S.Q.O.T. initiative and led by an independent moderator specialized in PRO measurement. Nominal group techniques, Delphi exercises and anonymous voting were used to select the most suitable PROM per PRO.

Results

The S.Q.O.T. II and III consensus meetings were attended by 28 and 27 participants, including a geographically diverse selection of PLWO and experts from various disciplines (bariatric surgeons, plastic surgeons, psychologists, dieticians, endocrinologists, researchers). The following PROMs were selected: BODY-Q (physical function, physical symptoms, psychological function, social function, eating behavior and body image), IWQOL-Lite (self-esteem) and QOLOS (excess skin). No PROM was selected to measure stigma as existing PROMs were inadequate.

Discussion

A standard set of PROMs to measure quality of life in obesity treatment research has been selected incorporating patients' and experts' opinions. This standard set should serve as a minimum to measure and compare QoL in obesity research studies and can be combined with clinical parameters.

P-15

ADDITION OF STIMULATION TO VAGAL BLOCK INCREASED GLYCEMIC CONTROL IN TYPE 2 DIABETIC SWINE AND INCREASED GLUCOSE-INDUCED INSULIN RESPONSES

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Background

GLP-1 receptor agonists have become the gold standard for the treatment of type 2 diabetes mellitus (T2DM). However, due to compliance, cost, and side effects of GLP-1s there is still need for novel treatments for T2DM. It has been shown clinically that sub-diaphragmatic vagal block, using high frequency alternating current, significantly decreased fasting plasma glucose one week following the initiation of block which was preserved for 3 years. However, increased regulation of blood glucose in the post prandial state also has significance in maintenance of glycemic control.

Objectives

Experiments were conducted to test if block enhances glycemic control in the absorptive state by conducting oral glucose tolerance tests (OGTTs) in a swine model of T2DM during vagal block. Since it has been shown that vagal stimulation increases plasma insulin, we also tested if the addition of sub-diaphragmatic vagal stimulation, during block, will enhance performance on OGTTs. Insulin and glucagon were also measured prior to and following vagal neuromodulation.

Methods

Bi-polar cuff electrodes delivered a 5000 Hz blocking signal to either the anterior and posterior sub-diaphragmatic vagus nerve or a 5000 Hz signal to the anterior vagus nerve and a 1 Hz signal to the posterior vagus nerve. Performance on OGTTs during neuromodulation was assessed in alloxan treated swine (n=3) by calculating the area under the curve (AUC) during the OGTT. Insulin and glucagon were assayed during OGTTs prior to and following applications of vagal neuromodulation.

Results

Block did not decrease OGTT AUC compared to Sham. With the addition of stimulation there was a significant decrease in OGTT AUC compared to Sham. An increased insulin response during OGTTs was observed following multiple applications of stimulation and block, but a change in glucagon was not observed.

Conclusion

The addition of simultaneous vagal stimulation to vagal block increases glycemic control compared to vagal block alone and a change in insulin response to glucose may be a mechanism behind enhanced glycemic control during block and stimulation. Since vagal stimulation and block parameters are adjustable gives inspiration of personalized medicine using this approach and a possible unique therapeutic option for the treatment of T2DM.

P-16

ADHERENCE TO LIFESTYLE MODIFICATION AFTER ONE YEAR OF BARIATRIC SURGERY IN INDIAN PATIENTS

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Background

Adhering to a healthy diet and taking supplements after bariatric surgery is crucial for long-term success and overall health. The specific dietary recommendations and supplement needs may vary based on the type of bariatric surgery and individual patient factors. Supplementation is often recommended after bariatric surgery to ensure that patients meet their nutrient needs, as malabsorption can occur with some types of surgery. Supplements recommended after bariatric surgery include a multivitamin, calcium, vitamin D, and vitamin B12.

Objective

This study aimed to assess adherence to supplementation after one year of bariatric surgery in Indian patients. Additionally, we assessed diet adherence and supplementations or biochemical deficiencies.

Methods

327 adults were followed one year post bariatric surgery (56.3% OAGB-MGB, 27.5% RYGB and 16.2 % SG) regarding diet adherence and supplementations (calcium-vitamin D, vitamin B12 and iron). Blood sampling was performed preoperatively and 1-year post-surgery.

Results

About 60 % of the Indian patient had a high adherence rate (≥ 80 %) after one-year post-surgery, but a significant proportion had discontinued the intended lifelong supplementation: 21 % for calcium-vitamin-D and 19 % for B12. Biochemical deficiencies were uncommon one year after surgery.

Conclusion

Patients must continue taking supplements and following a healthy diet after the first year of bariatric surgery to maintain weight loss and prevent nutrient deficiencies. Regular follow-up appointments with a healthcare provider and ongoing support from a registered dietitian can help ensure long-term success.

Keywords: Bariatric surgery, Diet adherence and supplementation, Indian Patient.

P-17

ADHERENCE TO NUTRITIONAL AND PHYSICAL FOLLOW-UP IN THE POSTOPERATIVE PERIOD OF BARIATRIC AND METABOLIC SURGERY

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Introduction

The follow-up of nutritional intervention and physical activity throughout the process involving bariatric surgery is extremely relevant, as it helps in adequate weight loss, maintenance of lean body mass and formation of healthy lifestyle habits.

Objective

To evaluate adherence to nutritional and physical monitoring in a bariatric surgery team in southern Brazil.

Methods

Patients are monitored pre- and postoperatively by the entire multidisciplinary team. Nutritional and physical activity monitoring begins with a preoperative evaluation. Nutritional assessment is performed 30, 60 and 90 days after surgery and every 3 months thereafter. The evaluation with the physical educator is carried out 30 days after the surgery and after this period the treatment continues to be offered, but there is no obligation to continue. Postoperative treatment is carried out at an additional cost to preoperative treatment. Patients are encouraged to follow up postoperatively with the diet and exercise protocol offered in consultations.

Results

50 patients were evaluated, of whom 90% were women, with a mean age of 37 years. All patients returned for nutritional monitoring in the first 30 days and only 11 for the physical exercise program. In the follow-up of 60, 90, 120, 180 days and 1 year, 49, 26, 14, 19 and 9 patients returned for follow-up with the nutritionist, respectively. For the physical exercise program over the first year, only 17 patients returned for follow-up and, of these, 11 already practiced exercises preoperatively.

Conclusion

Adherence to postoperative nutritional monitoring was satisfactory in the first 60 days. The probability is that during this period the evolution of food consistencies and adaptations takes place and, therefore, greater adherence. After this period, there was a reduction in the return of patients. Unlike the practice of physical activity, it had a low adherence throughout the postoperative period. The data presented, despite a small sample, demonstrate that we need to create strategies for the follow-up of these patients in the postoperative period and the practice of exercises in the preoperative period seems to promote greater adherence in the postoperative period.

P-18

ADOLESCENT BARIATRIC SURGERY – A SURVEY OF REFERRING PHYSICIANS

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Background

The prevalence of children and adolescents living with severe obesity is increasing. Bariatric surgery is safe and effective in adolescents, with significant improvement seen in co-morbidities, and psychosocial functioning. The opinions of referring professionals to bariatric surgery is largely unknown in Ireland.

Objective

This questionnaire will provide insight into the referring practices of professionals involved in the care of adolescent and will identify barriers to the development and implementation of child and adolescent weight management services.

Methods

A questionnaire was distributed via email to GPs and Consultants involved in the care of children and adolescents in the Republic of Ireland. The online survey platform Qualtrics XM was utilised (Qualtrics, Provo, UT).

Results

There were 45 responses to the questionnaire (23 GPs, 8 Consultant Paediatricians, 9 Medical Consultants and 5 Surgical Consultants). 46.6% of respondents would not refer an adolescent for bariatric surgery. Paediatricians were significantly more likely to consider referral versus GPs (75% vs 27%, $p=0.034$). 49% of respondents felt that adolescents should be at least 18-19 prior to referral. 93% report that adolescents should be in a weight management service for at least 12 months before consideration, 33.3% suggested >24 months. 44% of respondents did not think that in an adolescent with a BMI >35, regularly missing school should be considered an indication. 91% of GPs responded that after surgery, adolescents should be followed up long term in a weight management clinic. Regarding medications, only 25% of paediatricians felt that liraglutide should be considered for adolescents. Qualitative responses suggest there is inadequate community support available for weight management and that psychological assessment is of particular importance.

Conclusion

Although bariatric surgery may be the best intervention for well selected adolescents with severe obesity, this questionnaire identified some barriers to referral to these services. Misconceptions and concerns held by medical professionals can be addressed through education and engagement and should be a fundamental element of the development of the child and adolescent weight management services

P-19
ADVANTAGES OF ENDOSCOPIC VACUUM THERAPY FOR STAPLE LINE LEAKS AFTER SLEEVE GASTRECTOMY

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Background

The management of staple-line leaks (SLL) following sleeve gastrectomy (SG) remains challenging. Current treatment options, such as the insertion of self-expanding metal stents (SEMS) and reoperation and advanced Clip systems, offer only closure of the defect. Endoscopic Vacuum Therapy (EVT) on the other hand, allows for the closure as well as the drainage of the defect region.

Objectives

The aim of this study was to compare the effectiveness of Endoscopic Vacuum Therapy to the effectiveness endoscopic closure of staple-line leaks, following sleeve gastrectomy. We aim furthermore to present technical aspects of EVT and clinical algorithms for treatment of SLL in an oral presentation.

Materials and methods

In the Time period January 2009 to December 2019, 21 Patients were treated for SLL following SG. Out of them, eight patients were treated with EVT and 13 using metal stents alone, or in combination with surgeries and Over-the-Scope Clip (OTSC) application. The outcome measures, including the duration of therapy, therapy success and changes in treatment strategy, were collected and analyzed.

Results

Patients from both groups showed no significant differences regarding Age, BMI, comorbidities and characteristics of the staple-line leaks. Patients treated using Endoscopic Vacuum Therapy, required fewer endoscopies and showed significant reduction in hospital stay, complication rates and treatment duration. Interestingly, the success-rate of endoscopic treatment, in the EVT-group, was significantly higher (Surgery needed only in 1/8 Patient (12.5%)) compared to the endoscopic closure of the defect (Surgery needed in 5/13 Patients (38.5%)) (p=0.027).

Conclusions

The Use of EVT is associated with reduced complications and treatment duration on one hand, and with enhanced outcome on the other hand.

P-20

AGE DOES NOT AFFECT WEIGHT LOSS AFTER BARIATRIC PROCEDURES IN THE ELDERLY POPULATION: RESULTS FROM A NATIONAL MULTICENTER COHORT STUDY

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Background

With increasing incidence of obesity worldwide and the aging of the population there has been an increase in the number of elderly patients undergoing bariatric operations who represent up to 10% of all bariatric candidates in academic medical centers. Although bariatric surgery in patients above 65 years demonstrates comparable outcomes with the younger population, there is still controversy regarding surgical indication, risk assessment, and choice between different types of surgery

Objectives

We designed a study to investigate factors contributing to weight loss success after bariatric surgery in the population aged 65 or more.

Methods

The study comprised patients aged 65 or more qualified for primary bariatric surgery from February 2014 to September 2022 in 9 Polish bariatric centers who completed 1 year of follow-up. The retrospective analysis included demographical and clinical characteristics, presence of comorbidities and surgical techniques. The assessed endpoint was weight loss 1 year after surgical intervention defined as excessive weight loss (EWL) over 50%. To identify predictors of weight loss success we evaluated the relationship between preoperative indicators and outcomes by uni- and multivariate logistic regression.

Results

Out of 284 analysed patients, 173 (60,9%) were women and 111 (39,1%) were men with mean age 67 years. Mean preoperative BMI was 43,1kg/m². Most common comorbidities were: hypertension (85,9%) and diabetes mellitus (51,4%). Patients lost on average 7kg during preoperative preparation period. Sleeve gastrectomy (SG) was the most frequently performed procedure (82,0%). Postoperative BMI reached 34,1%. The majority of patients achieved desired outcome >50% of EWL (56,7%). Uni- and multivariate logistic regression analysis confirmed sex (OR=0,5), preoperative BMI (OR=0,9), time from first appointment (OR=0,9), preoperative weight loss (OR=0,9) and OAGB (OR=6,7) to have significant impact on weight loss 1 year after bariatric surgery.

Conclusion

Bariatric surgery is effective method for obesity treatment in elderly population. Sex, preoperative BMI, time from first appointment, preoperative weight loss and OAGB are independent predictive factors of weight loss after bariatric surgery. Recognition and optimization of identified factors would be valuable in preoperative assessment of elderly patients.

P-21

AMBULATORY REVISIONAL BARIATRIC SURGERY IS SAFE AND FEASIBLE. EXPERIENCE FROM A HIGH VOLUME BARIATRIC CENTER

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Introduction

Enhanced recovery protocols came to laparoscopic surgery care in the late 1990s. They have brought faster recovery, fewer complications and a reduction in hospitalization time. Shorter hospital stay results in less infections, greater comfort for the patient and lower cost. There is evidence about the feasibility and safety of ambulatory primary bariatric surgery (sleeve gastrectomy and gastric bypass) but there is no published evidence on this regard about ambulatory revisional bariatric surgery.

Objective

To assess the feasibility and safety of outpatient revisional bariatric surgery in a high-volume bariatric center.

Methods

Retrospective review of a prospective database of all patients undergoing Revisional bariatric surgery (Sleeve Gastrectomy (SG) to One Anastomosis Gastric Bypass (OAGB) or Roux-en-Y Gastric Bypass (RYGB), Gastric banding (GB) to OAGB or RYGB and OAGB to RYGB) after implementing enhanced recovery protocols. Inclusion criteria was age between 18 and 65, BMI lower than 65, no use of anti coagulants and no severe medical conditions. Anthropometric data, comorbidities, length of stay, need for readmission or reoperation and 30-day morbidity were recorded

Results

From March 2021 to March 2023, 1088 patients underwent bariatric surgery in our Center; 58 of them were revisional bariatric surgery. 7 didn't fulfill outpatient criteria, and 6 were excluded for complex surgery, bleeding, intolerance or post-surgical hypotension. Of the 45 included patients, 40 (88,9%) were female, mean BMI was 40,9 (22,2-64,7, MD 6,21) and mean age was 45,9 (24-65). 10 (22,2%) were SG to OAGB, 28 (62,2%) SG to BGYR, 3 (6,6%) GB to OAGB, 2 (4,4%) OAGB to BGYR and 2 (4,4%) RYGB Trimming. 1 patient was readmitted because of pain and was managed with IV NSAIDs with hospital discharge after 24h and ambulatory management. No one required reoperation and there was no mortality in this group.

Conclusions

Outpatient revisional bariatric surgery is feasible and safe in a high volume center with an experienced surgical team. Readmission rate where acceptable. Enhanced recovery protocols and carefully selected patients may play an important role in safe ambulatory revisional bariatric surgery.

P-22

ANALYSIS OF BILIARY REFLUX IN PATIENTS OPERATED BY THE ONE ANASTOMOSIS GASTRIC BYPASS TECHNIQUE

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Background

A recently created bariatric surgery technique is known as the One Anastomosis Gastric Bypass (OAGB) technique, a simplification of the already consolidated Gastric Bypass. Despite still being an experimental surgery with a low casuistry in Brazil, this technique has shown similar and sometimes superior results when compared to gastric bypass, in addition to being safer and with lower morbidity. However, the problem lies in the possibility of bile reflux that can lead to the development of cancer in the gastric pouch.

Objectives

Assess the presence of bile reflux through pre and postoperative endoscopies in 67 patients submitted to bariatric surgery by the One Anastomosis Gastric Bypass technique.

Methods

Retrospective analysis of endoscopies performed between 2017 and 2023. The mean postoperative period was 12 months after surgery. The work was submitted and approved by the Committee for Ethics in Research.

Results

67 pre and postoperative endoscopies of patients previously submitted to bariatric surgery by the OAGB technique were evaluated. In the preoperative evaluation, 100% of the patients did not have bile in the gastric pouch, while in the postoperative evaluation, 34 of them (50.74%) had bile in the stomach. These data suggest that the surgery may have increased bile reflux into the gastric cavity. Regarding the search for esophageal lesions that indicated the presence of esophagitis, 10 patients (14.9%) had some degree of esophagitis before surgery. This number after surgery rises to 19 (28.35%) patients, showing a relationship between surgery and an increase in endoscopic findings of esophagitis. Considering the presence of gastritis at endoscopy, 33 patients (49.2%) already had this condition prior to surgery and, after surgery, this number remained the same, showing no apparent correlation between this surgical technique and the increased occurrence of gastritis.

Conclusion

It is possible to associate the OAGB technique with the higher incidence of bile found in the gastric pouch and esophagitis. So far, the gastric mucosa does not seem to be affected by this surgery. New studies should be carried out with larger casuistry and long-term follow-up, in order to provide more expressive data about this technique.

P-23

ANALYSIS OF CAUSES AND FACTORS OF 100 % EXCESS WEIGHT LOST AFTER SLEEVE GASTRECTOMY

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Introduction

One of the important postoperative success criteria of bariatric surgery is measured primarily in postoperative weight loss. The average excess weight loss after five years in a laparoscopic sleeve gastrectomy is reported to be around 60-75%. We monitored all patients and identified 620 patients who reached 100% excess weight loss and more (from 100% to 128%).

Methods

1018 obese patients were done Laparoscopic Sleeve Gastrectomy procedure during the period from January 2014 to September 2020. During the procedures the esophageal-gastric junction was mobilized, the size of bougie was 36-38 Fr and resection was done by tension on the stomach. The average number of the staple suture to form a “gastric tube” was 4.8. The distance from the pylorus was 2-3 cm. Reinforcement of staple line by oversewing was performed in 84.6% of cases. The average BMI of patients was 37.2 kg / m² (from 29.7 to 46 kg / m²), the average body weight was 107.7 kg (from 78 to 140 kg).

Results

All patients were follow-up at least 3 times in the first year of the postoperative period. The average weight loss after 3 months after surgery was 71 % of overweight, after 6 months - 83.7%, after 9 months – 93 %, after 12 months – 103.3 %. More than a year (the last follow- up was used) from 103% to 98%. No observed nutrient deficiencies and are largely prevented by daily supplementation but 93 (15%) patients have discomfort while eating and 310 (50%) patients have taken microelements and vitamins. A weight regaining is observed in 241 (39%) and equal 80, 0% EWL (the last follow- up was used).

Conclusion

The Sleeve Gastrectomy is an effective treatment for severe obesity and according to follow- up it was noted that people with obesity can have excellent reductions in excess body weight. The main factors which help reach such success are BMI = 30-35 kg /m², patients with a history of weight loss attempts, the use of a bougie of 36-38 Fr, and a distance from the pylorus no more than 2-3.

P-24

ANALYSIS OF IDENTIFYING OBSTRUCTIVE SLEEP APNEA WITH QUESTIONNAIRES AND POLYSOMNOGRAPHY IN KOREAN PATIENTS

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Background

Obesity is recognized as a serious global health problem. In terms of long-term weight loss and improvement of comorbidities in people with obesity, bariatric surgery has been covered by health insurance in Korea since 2019 and the number of patients receiving the surgery is increasing.

Objectives

The purpose of this study is to assess the quality of sleep in candidates for bariatric surgery and provide fundamental data for an effective intervention plan to improve their sleep for patients.

Methods

We retrospectively analyzed the medical records, laboratory results, and sleep study questionnaires of patients who underwent bariatric surgery at Department of Surgery, Kosin University Gospel Hospital from January 1st, 2019 to September 30th, 2022, with a body mass index (BMI) of 30 kg/m² or higher.

Results

We conducted an analysis of 137 patient groups divided into categories according to the WHO obesity class. Patients with Class 1 obesity tended to be younger than those with Class 3 obesity ($p=0.03$). The survey results showed that regardless of obesity class, patients maintained poor sleep quality. The results of the polysomnography showed that as body weight increased, the Apnea-hypopnea index also increased. Severe obstructive sleep apnea (OSA) increased in male patients and in cases of increasing age and BMI, with corresponding odds ratios of 5.79 (95% CI; 2.32-14.45), 1.09 (95% CI; 1.04-1.14), and 1.16 (95% CI; 1.08-1.24), respectively, all of which were statistically significant.

Conclusion

All patients in the population of bariatric surgery candidates in Korea reported discomfort during sleep. Patients classified as obesity class 3 showed to exhibit severe OSA. The risk of developing severe OSA was higher in male patients, those with higher age, and those with higher BMI.

P-25

ANALYSIS OF OVERNIGHT REMOTE OBSERVATIONS OF BARIATRIC DAY-CASE PATIENTS AT UNIVERSITY COLLEGE LONDON HOSPITALS NHS FOUNDATION TRUST (UCLH)

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Background

The impact of Covid-19 pandemic on bariatric surgery is vast. The waiting time for surgery under the National Health Service in the UK is over 2 years. This has been further affected by theatre cancellations due to staff and bed shortage. One of the strategies that we employ to improve access to surgery is day surgery for suitable patients. The day surgery pilot was started in 2022 where patients are discharged home with remote monitoring device, and an on-call bariatric surgeon gets an alert when patient's observations are outside the set limits.

Objectives

This study aims to analyse the following parameters to identify any requirement for change in day surgery protocol and if remote monitoring is necessary:

- number of alerts of abnormal respiratory rate, desaturation and tachycardia;
- number of incidents where national early warning score (NEWS) is above urgent review threshold (> 4 or >3 in one parameter).

Method

Analysis was carried by reviewing raw data and NEWS of patients' clinical observations on CheckPoint Cardio system which measures heart rate (HR), respiratory rate (RR), oxygen saturation and blood pressure. The device also gives information of patients' positions.

Results

On reviewing the last 5 day-cases, the average number of alerts overnight was 14.8. Although none of the patients scored NEWS above 4 (urgent review threshold), all our patients scored >3 at least once overnight with RR >25. The longest duration of tachypnoea was 2 hours. None of these episodes were associated with desaturation. There were on average 2.4 alerts for tachycardia (HR >100) overnight. These episodes were short-lived and associated with patients' movements.

Conclusion

Day-surgery patients remained stable overnight. Although the majority of alerts were short-lived, there were significant alerts of high RR. This could be explained by higher RR observed in patients living with obesity. The clinicians were able to make decisions based on other available parameters. One of the recommendations would be to enable a feature where patients can add symptoms, such as pain on the App linked to monitoring.

P-26

ANALYSIS OF WEIGHT LOSS PATTERN AFTER OAGB-MGB BASED ON THE SEVERITY OF OBESITY IN PATIENTS WITH FIVE-YEAR FOLLOW-UP

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Background

One Anastomosis/Mini Gastric Bypass (OAGB-MGB) represented approximately 1.5% of bariatric surgeries worldwide. Currently, it is the third most common procedure.

Objective

This study was undertaken to determine the weight loss pattern in the different classes of obesity and their significance.

Method

Data on all patients who had OAGB-MGB from 2017-2019 was retrieved from a prospectively maintained database of bariatric operations. Data on the severity of obesity and weight loss at various intervals were analysed and presented.

Results

414 patients had OAGB-MGB. 7.5%, 13.8%, 49%, and 29.7% were Class I, II, III and people with severe Obesity, respectively. At the end of three years, the average %EBWL was 80.38% and 82.61 % in class I and II patients, respectively, and increased to 103.5% and 115.8%, respectively, at the end of 5 years, which was excessive weight loss. In class III and the people with severe Obesity, the average %EBWL was 82.68% and 79.66 % at three years and decreased slightly to 81.5% and 74.84%, respectively, at five years.

Conclusion

Our study indicates that class I and II patients tended to have excessive weight loss, whereas class III and patients with severe obesity managed to maintain excellent weight loss from the third to the fifth year. The finding in this study brings into vogue the use of OAGB-MGB in class I and II obesity patients. There is a need for multi-centre and prospective studies to collaborate on our findings which may influence the indication for OAGB-MGB and require modification of the operation in class 1 and II obese patients.

Keywords: Obesity, OAGB-MGB, Weight loss, Excessive weight loss.

P-27

ANASTAMOTIC GASTRO-JEJUNAL ULCER PERFORATION FOLLOWING ONE-ANASTAMOSIS-GASTRIC-BYPASS: CLINICAL PRESENTATION AND OPTIONS OF MANAGEMENT: CASE SERIES AND REVIEW OF LITERATURE

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Background

One-Anastomosis-Gastric-Bypass (OAGB) is an attractive bariatric procedure compared to the gold standard Roux-en-Y gastric bypass (RYGB) with one less anastomosis. Thousands of this procedure has now been performed by different surgeons who believe it could hold fewer complications than RYGB. However, postoperative complications including the formation of anastomotic ulcers and possible perforation remain a main concern following OAGB.

Objective

To highlight about the incidence, clinical presentation and options of management of anastomotic ulcer perforation following OAGB.

Methods

We report three cases of perforation of an ulcer at the gastro-jejunal anastomosis following laparoscopic one-anastomosis-gastric-bypass. All cases needed surgical intervention after adequate resuscitation.

Results

All patients were successfully managed using a minimally invasive approach with different techniques of repair (primary suturing of the perforation or resection and conversion to Roux-En-Y gastric bypass). All patients did well and were discharge in a stable condition after four to five days.

Conclusion

Perforation of an anastomotic ulcer post one-anastomosis-gastric-bypass is a serious condition and can be a life threatening complication. A high index of suspicion helps to diagnose these cases in patients presenting with acute abdomen following OAGB. Adequate resuscitation and repair of the perforation are main lines of treatment. Definitive surgical option depends on the general condition of the patient, timing of presentation, size and site of the perforation and experience of the surgeon.

P-28

ANTERIOR VS POSTERIOR GASTRO JEJUNAL ANASTOMOSIS IN OAGB, A MULTICENTER RETROSPECTIVE STUDY

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Background

Laparoscopic OAGB is an effective weight loss procedure, with a worldwide arising number of procedures during the last years. Despite the large number of procedures there is a lack of evidence about the better position of the gastro jejunal anastomosis that could be performed on the anterior or posterior gastric pouch wall.

Objectives

The aim of our study is to understand which kind of gastrojejunal anastomosis in OAGB in terms of post-operative complications the aim of this paper is to analyze the relationship between the site of GJ anastomosis and parameters of efficacy in terms of weight loss and post-operative long terms complications.

Methods

We retrospective analyze prospective collected data of all consecutive patients which undergoing OAGB in two different obesity centers between January 2019 and December 2021. All consecutive OAGB were included in the papers. Data collected included biometric features, intra operative data and post-operative data, at least 1 year follow-up data were recorded. Continuous data were expressed as mean \pm standard deviation (SD). To compare continuous variables, an independent sample T test was performed. The χ^2 test was employed to analyze categorical data. All the results are presented in this study as 2-tailed values with statistical significance if the p values were below 0.05.

Results

A total of 205 patients has been evaluated, (129 in posterior group and 76 in anterior group). Only one positive blue test for each group has been found. In both groups we found a Clavien Dindo 3a post-operative complication. No post operative leaks have been found in both groups. At 1 year follow up in both group no stricture or marginal ulcer has been recorded. Statistical differences in %EWL has been found in the two groups with a higher EWL in posterior group. At one year follow-up in the anterior group we found less dumping syndrome despite there was not a statistical difference.

Conclusion

We found an acceptable %EWL at 1 year follow-up in both groups. Less dumping syndrome has been found in anterior group. In our opinion the position of anastomosis must be tailored on patient alimentary habitus and WL need.

P-29

ANTI-AGEING EFFECTS OF BARIATRIC SURGERY IN AGED RATS

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Background

Aging is defined as a set of changes in morphology and function which take place over time. Aging is currently considered as a consequential result of metabolic syndrome, which is largely due to obesity. Compared with non-surgical treatment of obesity, bariatric procedure is most efficient in improving weight loss outcomes and comorbidities associated with weight, and shows higher remission rates and lower the risk of metabolic syndrome. When viewing aging as a consequence of metabolic disease, bariatric surgery could have the potential to treat or reverse aging process. We aim to investigate the effect of bariatric surgery on aging by performing bariatric surgery on murine models.

Objectives and Methods

Thirty-six Wistar rats were grouped according to the time period (10 months and 14 months) when they were being operated. Each group was randomly distributed to sham and Roux-en-Y gastric bypass groups, and were operated at 10 and 14 months. The rats were finally sacrificed 2 months after the surgery. Specimen from the sacrificed rats were harvested and tested for senescence markers.

Results

The multicolor immunohistochemistry (IHC) analyses of intestine tissue revealed decreased β -gal, H2AX, p27, and p21 staining in bypass group rats compared to sham groups, regardless of the time period of the operation. p27 and p21 protein levels were decreased in intestine tissue with bypassed rats on Western blot. In the Congo red stained kidney tissue, the β -amyloid was seen less in bypassed rats when operated at 14 months. Rat tumor necrosis factor (TNF) $-\alpha$, CXCL 1(chemokine ligand 1), IL (interleukin)-6, and in IL-8 levels were significantly decreased in bypassed rats compared to sham controls in serum, and the decrease were irrelevant with the time period of the surgery.

Conclusion

Our study demonstrates that rats with bypass surgery shows less senescence markers compared to control groups, and the phenomenon was not limited to intestinal tissue. This study is a novel experiment showing positive effect of bariatric surgery on delaying aging on murine models.

P-30

APPLICATIONS OF THE SIGSTAD SCALE FOR THE DIAGNOSIS OF DUMPING SYNDROME IN PATIENTS AFTER ONE ANASTOMOSIS GASTRIC BYPASS AND SLEEVE GASTRECTOMY

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Background

Dumping syndrome is the most common complication after sleeve gastrectomy and one anastomosis gastric bypass surgery due to rapid gastric emptying.

Objective

The primary objective of this study is to identify if there is any difference between two types of bariatric procedures, i.e., sleeve gastrectomy and one anastomosis gastric bypass, and the secondary objective is to evaluate the most prevalent symptoms of dumping syndrome.

Methods

Ninety patients who underwent sleeve gastrectomy or one anastomosis gastric bypass at Indraprastha Apollo Hospital, New Delhi, with nutritional follow-up at the same hospital were selected. A questionnaire with the Sigstad Symptomatology Scale, questions related to Dumping Syndrome, and anthropometric and demographic data was applied to the population.

Results

90% of the 90 patients who underwent gastric surgery, exhibited at least one of the symptoms from the Sigstad's Scale. The total average score of the Sigstad Symptomatology Scale obtained was $11,9 \pm 9,7$. In the one anastomosis gastric bypass surgery group (Group I), the total average score ($16 \pm 9,7$) was higher than in the sleeve gastrectomy group (Group II). 63,3% of the patients revealed to have Dumping Syndrome ($\text{sum} \geq 7$ in the Sigstad Scale), which was more prevalent in Group I. The most common symptom among the whole group was "weakness and fatigue". Almost all 16 symptoms began during the first hour after a meal, which means a higher prevalence of early dumping syndrome. Bariatric Surgery appears to increase the risk of developing dumping syndrome. The total score is positively correlated with the amount of weight reduction.

Conclusion

It seems to exist a superior relation between dumping syndrome and one anastomosis gastric bypass surgery, compared to sleeve gastrectomy. The Sigstad Scale, proved to be a useful tool to diagnose the syndrome, mainly during nutritional follow-up.

P-31

APPLYING SERIAL BODY COMPOSITION ANALYSIS WITH EVIDENCE-BASED NUTRITION PRACTICES FOLLOWING METABOLIC-BARIATRIC SURGERY TO ENHANCE PATIENT OUTCOMES AND PROFESSIONAL PRACTICE

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Background

Preliminary body composition (BC) guidelines published to fill a knowledge gap in metabolic-bariatric surgery introduced gender-specific goals for 12-month percent body fat (%BF) based on World Health Organization obesity thresholds and for lean mass (LM) sparing. Twelve-month %BF outcomes for other studies inconsistently fell below those thresholds. No study described nutrition practices.

Objectives

The approach utilized to generate the preliminary BC guidelines is described to offer guidance to professionals seeking to enhance professional practice and optimize patients’ BC and weight outcomes. It incorporates serial body composition analysis (sBCA) concomitant with evidence-based nutrition practices.

Methods

Guidelines were generated using original research board-approved Roux-en-Y Gastric Bypass and Sleeve Gastrectomy studies. The dietitian assessed BC, developed tools, counseled patients, and collected BC data from patients aged 18 and above in a 532-bed nonprofit acute-care institution in Northeast Ohio, USA from May 2007 through November 2016. Patients’ BC was analyzed using bioimpedance analysis on initial visit, pre-surgically, and post-surgically at months 3, 6, and 12 generating handouts of individual’s progressive %BF graphs with mini-spreadsheets of weight and BC changes on which BC goals were written. The “Nutrition Goal Checklist” (Table 1), an evidence-based synopsis of imperative practices, was applied pre- and post-surgically. Patients’ food/beverage/exercise journals were coordinated with weight and BC changes to develop individual short-term goals toward meeting guidelines’ one-year goals.

Table 1. Nutrition Goal Checklist.

- 1) Keep your food/beverage/exercise journal daily.
- 2) Eat 3 planned meals daily.
- 3) Choose mostly whole foods.
- 4) Take a multivitamin daily pre-surgically (supplements as directed post-surgically).
- 5) Sip most of your beverages between meals slowly.
- 6) Eat slowly, chewing to a liquid consistency.
- 7) Drink non-carbonated, caffeine-free, nonalcoholic, and sugar-free beverages.
- 8) Avoid concentrated sweets, breads, and pastas.
- 9) Include but limit fat.
- 10) Exercise daily.

Results

Serial BCA and interventions consistently influenced outcomes to generate preliminary BC guidelines encompassing %BF and LM-sparing goals. Specificity of BC outcomes was affirming to patients and practitioners.

Conclusion

The pioneered approach of utilizing sBCA together with tools, goals, and evidence-based nutrition practices helped optimize patients’ post-surgical weight and BC changes. Research is needed to solidify formal BC guidelines.

P-32

ARE WEATHER AND AIR QUALITY ASSOCIATED WITH PHYSICAL ACTIVITY AND SEDENTARY TIME IN ADULTS BEFORE AND AFTER BARIATRIC SURGERY?

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Background

Most metabolic and bariatric surgery (MBS) patients perform too little moderate-to-vigorous intensity physical activity (MVPA) and too much sedentary time (ST). Identifying factors that influence MVPA and ST in MBS patients is necessary to inform the development of interventions to target these behaviors. Research has focused on individual-level factors and neglected those related to the physical environment (e.g., weather and pollution). These factors may be especially important considering rapid climate change and emerging data that suggest adverse effects of weather and pollution on physical activity are more severe in people with obesity.

Objectives

This study is the first to evaluate associations of objective weather indices (i.e., weather [maximal and averaged temperatures], Wet Bulb Globe Temperature [WBGT]), and air quality [AQI]) with objectively-measured MVPA and ST before and after MBS.

Methods

Participants (N=77; 86% women, 44.5±11.3 years) wore an accelerometer for 7 days at pre- and 3, 6, and 12-months post-MBS to assess min/d spent in ST and MVPA. These data were combined with participants' local (Boston, MA or Providence RI, USA) daily weather and AQI data (extracted from federal weather and environmental websites). Multilevel generalized additive models were performed to test the associations in general, and pre- and post-MBS.

Results

Inverted U-shaped associations were found between weather indices and MVPA ($R^2 \geq .63$, $p < .001$), with a marked reduction in MVPA for daily maximal temperatures $\geq 20^\circ\text{C}$. However, sensitivity analysis showed a less marked decrease of MVPA during higher temperatures after MBS versus before MBS. AQI levels were negatively associated with MVPA before and after MBS ($R^2 = 0.64$, $p < .001$) and with ST before MBS ($R^2 = 0.395$; $p \leq .05$).

Conclusion

Moderate and warmer temperatures are associated with decreases in daily MVPA among MBS patients; however, potential adverse effects of warmer temperatures on MVPA appear to be reduced after MBS, possibly due to body composition changes and capacity to acclimate to warmer temperature during MVPA. Additionally, greater air pollution levels related to both lower MVPA and higher ST. Weather and environmental conditions should be considered in physical activity prescription for MBS patients, especially given ongoing and future climate changes, and obesity-related vulnerabilities to heat and air pollution.

P-33

ASSERTIVE REVISION SURGERY IN PATIENTS WITH SLIPPED GASTRIC RING

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Introduction

In scenarios where obesity is a major worldwide epidemic, an intervention directed at the stomach is necessary. This chronic disease (obesity) of multifactorial etiology has become more recent in the medical and social context, and with the progressive evolution of the disease, the therapy has also improved the most varied restrictive and disabsorptive surgeries, such as the gastric bypass technique. However, complications related to silastic ring, such as its migration and obstruction of the jejunal pouch anastomosis, might occur with indication for revisional surgery.

Objectives

To report the case of a patient who underwent silastic ring gastric bypass surgery for obesity control and who, after regaining weight, required a revision surgery due to slippage of the gastric ring.

Methods

This is a case report of revision surgery where the patient, GCN, female, 42 years old, 112 kg, with a history of obesity since adolescence, arterial hypertension, dyslipidemia and arthropathy of the knee and spine, worsened her obesity condition in 2008. With clinical, drug and nutritional treatment for 2 years without success, silastic ring gastric by pan was performed in 2011. Then, it evolved with slippage of the bypass ring and consequent obstruction of the jejunal loop and dilation of the gastric reservoir, causing gastroesophageal reflux disease (GERD), increased eating capacity and weight regain, and then revisional surgery is indicated. In January 2023, post-anastomotic resection of the dilated segment of the stomach and jejunal loop was performed, followed by video removal of the ring.



After the second surgical intervention, the patient lost 8 kg in 40 days of surgery in 2023, with resolution of the symptoms of gastroesophageal reflux.

Conclusion

For patients who present ring slippage and evolve with gastric pouch dilatation and weight regain, post-anastomotic resection of the dilated segment of the stomach and jejunal loop without a new jejunal pouch anastomosis proved to be safe for the treatment of substenosis caused by slippage of the ring and effective for returning the patient to their good weight loss.

P-34

ASSESSMENT OF DUMPING SYNDROME AFTER ONE ANASTOMOSIS GASTRIC BYPASS/MINI-GASTRIC BYPASS AND ROUX-EN-Y GASTRIC BYPASS- A SHORT-TERM COHORT STUDY

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Background

Dumping syndrome (DS) is a common postoperative problem after bariatric surgery. Most cases of DS are successfully treated with dietary adjustments. But, a lack of data on DS after One Anastomosis Gastric Bypass-Mini-Gastric Bypass (OAGB-MGB) and Roux-en-Y gastric bypass (RYGB) has been reported.

Objective

The present research was conducted to evaluate the incidence and effect of DS on weight-loss outcomes after OAGB-MGB and RYGB in patients with 2-year follow-ups.

Methods

A retrospective cohort study reviewed 250 morbidly obese patients who underwent OAGB-MGB (n=125) and RYGB (n=125) at our high-volume centre during 2018-2021. Clinical and demographic data were assessed. The incidence of dumping syndrome was evaluated using a validated Sigstad Score.

Results

Information about dumping symptoms and patient satisfaction was obtained from 220 patients; 30 could not be reached by phone. The short-term follow-up was two years. Significant differences between both procedures were found for the duration of surgery, complications, the incidence of DS and satisfaction postoperatively. DS occurred in 62/115 (53.9%) after RYGB and 47/105 (44.7%) after OAGB-MGB. Patient satisfaction was more significant in OAGB-MGB, where the complication rate was 4.1%, while it was lowest in RYGB, where there were the highest complications, 15.0%. Respectively.

Conclusion

The present results showed the clear superiority of OAGB-MGB, and the incidence of DS was higher in RYGB than in OAGB-MGB.

Keywords: Bariatric surgery, metabolic surgery, gastric bypass, obesity, dumping syndrome.

P-35

ASSOCIATION OF HYPERCHOLESTEROLEMIA WITH GASTRIC INTESTINAL METAPLASIA, FINDINGS AFTER SLEEVE GASTRECTOMY PATHOLOGY REVIEW

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Background

We evaluated the relationship between comorbidities associated with obesity, body mass index (BMI), and development of intestinal metaplasia (IM) after vertical sleeve gastrectomy (VSG).

Methods

All VSG specimens performed at an academic center between 2011 and 2018 were reviewed. All specimens underwent histopathological assessment, while those with findings suspicious for IM underwent additional immunohistochemical work up. Baseline patient characteristics and demographic data were obtained from Iran national Obesity Surgery database by retrospective review.

Results

A total of 862 adult individuals underwent VSG during the study period and specimens were histopathologically examined. All patients had preoperative upper endoscopy. The most common histopathological diagnosis was miscellaneous findings (57.8%) followed by no pathological finding (36.7%). The minority of patients (5.5%) had IM. While 40.5% of patients had positive *Helicobacter pylori* (*H. pylori*) infection preoperatively, just 13.8% had still positive infection post-operatively. Significant association was found between IM and hypercholesterolemia (OR: 1.95; 95% CI: 1.1, 3.5).

Conclusion

This study found a correlation between histopathologic changes in patients with IM and hypercholesterolemia. Prospective research studies are recommended to further examine this correlation.

P-36

AURICULAR ACUPRESSURE IN RELIEVING PONV AND PROMOTING GASTROINTESTINAL FUNCTION RECOVERY IN FEMALES AFTER LSG: A PROSPECTIVE RANDOMIZED CONTROLLED TRIAL

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Background

Laparoscopic sleeve gastrectomy(LSG) is the most popular bariatric surgery and post-operative nausea and vomiting(PONV) are prevalent after LSG especially in females. Auricular acupressure(AA) is a treatment of Traditional Chinese Medicine to relieve PONV and promote gastrointestinal motility.

Objectives

Introducing AA into the perioperative period of LSG to see if AA can further alleviate PONV and promote gastrointestinal motility in female patients with antiemetics.

Methods

94 patients were randomised into two groups and 82 patients eventually completed the study. The patients received AA 3-4 times daily for 15-20 mins each time during the perioperative period until 48h postoperatively. General information was collected preoperatively. Researchers used INVR scale to assess PONV and collected the time of first anus exhausting, the time of first fluid intake, and the time of first time to leave the bed.

Results

The baseline characteristics of the two groups were comparable. Compared with the control group, the AA had significant differences in the INVR($P=0.045$), vomiting($P=0.010$) and dry vomiting($P=0.032$) at 24h postoperatively, the INVR decreased from 16.7(8.2) to 10.0(12.8,5.0), the vomiting decreased from 7.0(9.0,4.0) to 4.0(5.0,0.5), and the dry vomiting decreased from 4.0(6.0,2.0) to 2.0(3.0,0.0). At 48h postoperatively, the AA had significant differences in the INVR($P=0.030$) and vomiting($P=0.017$), the INVR decreased from 10.0(12.8,5.0) to 1.0(4.8,0.0) and the vomiting decreased from 4.0(5.0,0.5) to 0.0(3.0,0.0). And AA was a significant difference in the time of the first anus exhausting($P=0.048$).

Conclusions

AA can relieve PONV after LSG in females, and the relief effect is more obvious as the treatment time increases, especially in relieving vomiting and dry vomit. AA can promote gastrointestinal exhaustion.

	AA	Control	P value
Age	33(31,35)	34(32,36)	0.385
BMI	35.5(34,37)	36.2(34,38)	0.956
GERD	17(42.5)	25(59.5)	0.123
Apfel	62.6(57.6,67.6)	66.5(62.4,70.7)	0.276
INVR			
12h	16.7(8.2)	18.7(7.0)	0.217
24h	10.0(12.8,5.0)	12.0(16.3,7.0)	0.045
48h	1.0(4.8,0.0)	4.5(8.0,0.0)	0.030
Vomiting			
12h	7.0(9.0,4.0)	8.0(9.0,7.0)	0.059
24h	4.0(5.0,0.5)	5.0(7.0,4.0)	0.010
48h	0.0(3.0,0.0)	2.5(4.0,0.0)	0.017
Dry vomit			
12h	4.0(6.0,2.0)	5.0(8.0,3.0)	0.096
24h	2.0(3.0,0.0)	2.0(3.0,0.0)	0.032
48h	0.0(0.0,0.0)	5.0(0.0,0.0)	0.074
Time of first anus exhausting	1117.9(988.8,1247.0)	1262.6(1135.5,1389.7)	0.048

This table contains information on patient baseline characteristics and postoperative conditions, data are described as mean(SD), number(%), or median(25th-75th percentile).

P-37

AUSTRALIAN CASE STUDY: BINGE EATING DISORDER IN BARIATRIC SURGERY PATIENT; TO SNACK OR NOT TO SNACK? THAT IS THE QUESTION

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Background

Individuals with binge eating disorder[BED] often report snack consumption, with loss of control[LOC] cited as a core feature. Bariatric metabolic surgery[BMS] *might* be a suitable therapeutic intervention, in selected individuals. Given binge eating behaviour as defined by DSM-V may not be possible due to post-surgical anatomical changes, many reports in the medical literature have examined LOC eating instead.

Introduction

Aim to (i) emphasize importance of pre-op BED screening and (ii) update HCPs on managing individuals with BED post BMS. In 2022, a 42yo female patient with bipolar disorder, ADHD, PTSD, depression and anxiety presented for routine bariatric aftercare. She had undergone the RYGBP in 2019, with a preop BMI 42.3 (112kg) and nadir BMI 20 (53kg) in 2020. She had *not* maintained clinical contact during the covid pandemic and was distraught she had regained 12kg (BMI 24.7). She described symptoms of a pathological relationship with food. After scoring high on EDE-Q and being assessed by a psychiatrist, a diagnosis of BED was made. Of note, the eating disorders unit recommended (i)against regular self-weighing (ii)regular snacking(2-3/day) (iv)avoidance small cutlery; antithesis to bariatric unit recommendations. This case was the clinical impetus for this medical literature review.

Methods

Pubmed was utilized to review the literature between 2015–2023. Key terms ‘binge eating disorder and bariatric surgery’, ‘management of BED’ and ‘bariatric surgery and eating disorders’.

Results

Primary goal of BED treatment is to achieve abstinence from binge eating, followed by sustainable weight loss. Target education to(i)adopt healthier eating/lifestyle habits (ii)modification of dysfunctional thoughts, (iii)increase ability to deal with negative emotions, and (iv)relapse prevention. Cognitive-Behavioral, Dialectic-Behavioral and Interpersonal Psychotherapy (IPT) have been evaluated as have adjunct pharmacological therapy specifically focused on reducing eating impulsiveness, binges and negative feelings.

Conclusion

Multi-modality and multi-disciplinary approaches appear to emerge as the best treatment strategy for long-term management of BED in BMS individuals.

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AUTOMATIC PATTERN RECOGNITION OF VARIATION IN THE SURGICAL STEPS OF LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS (RYGB)

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Background

There is high procedural variability among surgeons during Roux-en-Y gastric bypass (RYGB) procedures. Influence on subsequent outcomes is currently unknown. Cloud-based solutions and data science innovations enable large volumes of data to be assembled and annotated in a consistent way. Manual analysis of such large volumes of data is not practical. Artificial intelligence algorithms are necessary for obtaining scalable and clinically relevant solutions.

Objectives

We aimed to evaluate the feasibility of using an unsupervised learning approach to cluster RYGB cases based on the order of surgical steps followed (workflow).

Methods

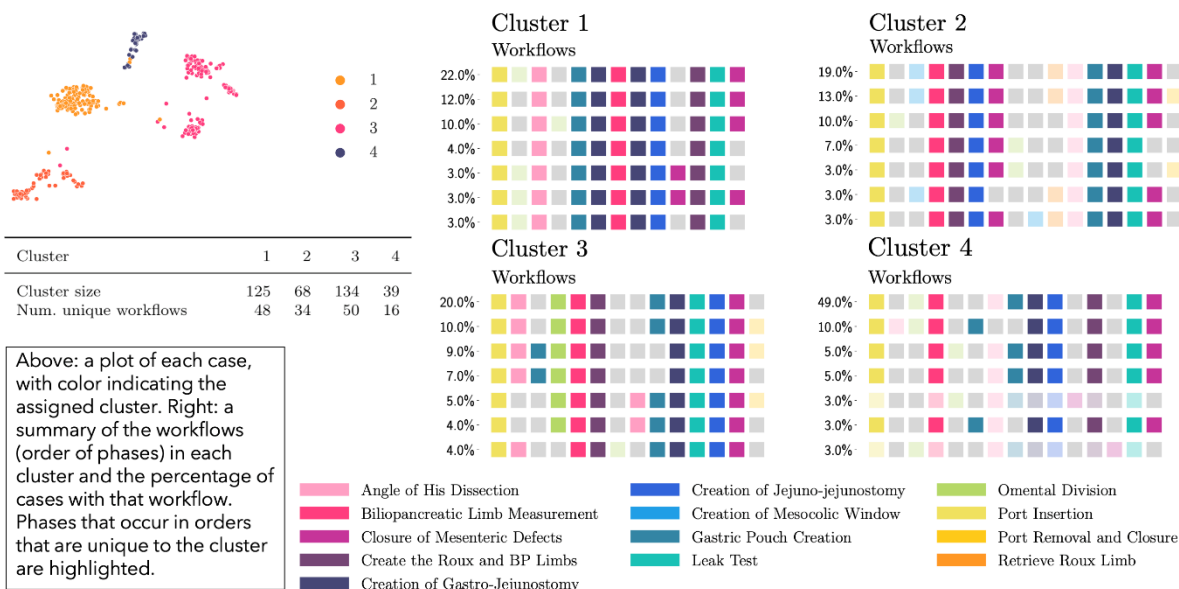
A de-identified dataset of 366 laparoscopic RYGB case videos from several institutions in Europe were analysed using machine learning algorithms. We annotated and segmented each video into procedural steps (creation of jejunum-jejunostomy (JJ), gastro-jejunostomy (GJ), biliopancreatic limb measurement (BLM), etc.) to obtain surgical workflows. Spectral clustering with the Levenshtein distance was used to find groups of similar cases. Sequential pattern mining was used to generate visualizations that were validated by bariatric surgeons.

Results

We identified four clusters of surgical workflows. Cluster 1 is marked by initial creation of gastric pouch followed by the GJ and the JJ, a workflow also commonly encountered in robotic procedures. Cluster 2 entails initial creation of the JJ, followed by the gastric pouch and GJ either in an ante-colic or retro-colic approach. Cluster 3 starts with the BLM to ensure enough bowel length and characteristically leaves the JJ to the end of the procedure. Cluster 4 is a variation of cluster 1 where the limb measurement occurs earlier (see figure).

Conclusion

We show the feasibility of using an unsupervised machine learning approach to identify surgical workflow clusters that can be interpreted clinically. These clusters give insights into technical variations used in practice. There is potential for applying our initial results to surgical education and video-based assessment, and assessing correlations with clinical outcomes (peri-operative complications and long-term measures such as weight loss).



Above: a plot of each case, with color indicating the assigned cluster. Right: a summary of the workflows (order of phases) in each cluster and the percentage of cases with that workflow. Phases that occur in orders that are unique to the cluster are highlighted.

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BANDED VERSUS NON-BANDED LAPAROSCOPIC SLEEVE GASTRECTOMY: 3 YEAR RESULTS OF A PROSPECTIVE COHORT STUDY

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Introduction

Non-banded laparoscopic sleeve gastrectomy (NBSG) is currently the most performed bariatric procedure for its safety and effectiveness, yet weight regain and reflux are still a disturbing long term disadvantage. We aim to compare results of both operations after a follow-up period of 3 years.

Methods

In this prospective cohort, patients undergoing either BSG or NBSG at bariatric surgery department at Ain shams University Hospital from January 2018 to January 2020 with no prior GERD symptoms or hiatal hernia were included. Patients who had previous bariatric or gastrointestinal surgery, psychiatric contraindications, pregnancy, and other medical reasons for denying laparoscopy were excluded. Patients were followed at 3, 6,12,24,36 months at surgery clinic.

Results

During 3 years of follow-up, no patient was lost. Of 200 patients, 100 underwent laparoscopic BSG and 100 underwent NBSG. At 3 years, BSG group had a significant BMI loss compared to NBSG group (p-value 0.0001). No significant difference regarding EWL %. No significant difference is detected for post-operative reflux between BSG vs NBSG (p=0.07).

Conclusion

Our study suggests that BSG is more effective than NBSG in reducing BMI at 1,2,3 years of follow up. Postoperative reflux were higher at BSG group yet statistically non significant.

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BANDED VS NON-BANDED GASTRIC SLEEVE – MATCHED PAIR ANALYSIS: A RETROSPECTIVE QUALITY OF LIFE COMPARISON

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Background

The sleeve gastrectomy (SG) has become the most popular bariatric-metabolic procedure. However, one well established long-term disadvantage after SG is loss of restriction which leads to weight gain and recurrence of morbidities. Recently a fixed ring system has been adopted to be placed around the proximal SG to maintain restriction. Due to the ring's position it is thought to potentially cause regurgitation and obstruction and effect the quality of life (QoL)

Objectives

The study compares the outcome of SG with and without a fixed ring system focusing on QoL and biomedical data.

Methods

This retrospective matched pair analysis included 62 patients in each group. The SG+ group underwent SG with silicone ring (MiniMizer ring) placement and the SG – group underwent conventional SG. The main outcome was measured with the Gastrointestinal Quality of Life Index (GIQLI). Other outcomes include weight loss, patient perceived reflux, regurgitation and dysphagia, PPI requirement, cholesterol, and blood sugar levels (BSL).

Results

Overall median age 44 years and median BMI 38.1. The median weight loss was higher in the SG+ versus SG - group at 12 months ($p=0.012$). Better weight loss was noted in the SG+ at 24 months (n.s.). There were lower quality of life scores in the SG+ than SG - ($p=0.018$). With regurgitation being slightly more frequent SG+ vs SG - ($p=0.041$). There was no significant difference between the use of PPI. Only at 3months SG- had lower BSL otherwise no sig difference in cholesterol and BSL between groups was observed.

Conclusion

This study helps to establish the clinical utility of the Minimizer Ring in SG. The ring seems to lead to better weight loss after 12 and 24 months. The differences in QoL are not in dysphagia nor reflux but do exist in regurgitation. The MiniMizer ring might be an option to improve long term weight loss after SG.

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BARBED SUTURES ARE MORE ERGONOMIC AND EQUALLY SAFE WHEN COMPARED TO MONOFILAMENT SUTURES IN BARIATRIC SURGERY

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Background

Bariatric surgery is technically demanding in terms of expertise and ergonomics.

Objective

To determine the safety of barbed sutures in the context of bariatric surgery compared to monofilament sutures.

Methods

All patients who underwent laparoscopic bypass surgery in a major tertiary centre were included. Outcomes in terms of complications (leaks, bleeding or obstructions) were compared between patients in whom the anastomosis was sutured with barbed sutures and monofilament sutures and this was analysed using Chi Squared test.

Results

793 patients underwent primary laparoscopic gastric bypass surgery for morbid obesity. Demographics include: M:F = 163:630; Median age: 47 (range: 20-74); Median ASA: 2; Median BMI: 42.5 Kg/m². Of the 69 patients in whom monofilament sutures were used to suture the gastro jejunal and jejuno jejunal anastomosis, 2 had complications (1 bleeding and 1 obstruction). Of the 724 patients in whom barbed sutures were used to suture the gastro jejunal and jejuno jejunal anastomosis, 14 went on to develop complications (5 bleeding, 8 obstructions, 1 perforation). These outcomes were analysed using Chi-squared test and was found not to be significant (p=0.59).

Conclusions

Barbed sutures can be safely used in complex bariatric surgical procedures such as gastric bypass with no adverse outcomes in terms of complications. There is the added advantage of better ergonomics while performing surgery in this challenging group of patients.

P-42

BARIATRIC AND METABOLIC SURGERY IN PATIENTS OLDER THAN 65 YEARS – A MULTICENTER STUDY

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Background

With the increase in life expectancy and growing number of people suffering from obesity, bariatric and metabolic surgery is becoming a big concern in the elderly population.

Objectives

The aim of this study was to collect, systematize and present the available data on the surgical treatment of obesity among Polish patients over 65 years.

Methods

A retrospective study analyzed patients over 65 years who underwent laparoscopic bariatric procedures in Poland from 2013 to 2022. The database contained demographic characteristics of patients and their obesity-related diseases, information about surgery and outcomes of bariatric treatment. The efficacy endpoints was percentage of excess weight loss (EWL%), percentage of total weight loss (%TWL), improvement in obesity-related diseases.

Results

The group consisted of 285 patients (173 woman, 60.7%). The mean follow-up was 47.5 months. The mean age was 66.7 years and the mean BMI before the surgery was 43.1 kg/m². 146 (50.0%) patients had T2D and 232 had HT. The most common performed surgery was sleeve gastrectomies (82.0%). The mean EWL% after surgery was 50.9% and the mean TWL% after surgery was 20.6% ±10.0. There was the statistically significant difference between AGB and OAGB, and SG and OAGB in %EWL (p=0.0116, p=0.009 respectively) and RYGB vs OAGB in %TWL (p=0.0291). After surgery 93 patients (63.7%) had complete or partial remission of T2D and 112 patients (45.9%) had complete or partial remission of HT. Only 10 patient (6.8%) with T2D and 34 patients (13.9%) with HT showed no changes in treatment of obesity related diseases after the surgery.

Conclusion

Bariatric surgery seems to be safe and effective method of treatment of obesity in patients over 65 years of age. OAGB seems to have better results in weight loss than SG, RYGB and AGB in elderly patients. Patients over 65 years of age had improvement in T2D and HT after bariatric surgery.

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BARIATRIC SURGERY – THE GIBRALTAR HOSPITAL AUTHORITY EXPERIENCE

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Background

In the current obesogenic environment with freely available energy-dense foods and modern sedentary lifestyle, weight gain is inevitable. In the Gibraltar Survey 2021, 65.7% of the population is classified as overweight or obese. Weight loss surgeries can save lives by achieve long-term weight loss, improve health and decrease overall mortalities.

Objectives

This study describes the outcomes of a bariatric surgery programme in a remote secondary hospital in Gibraltar.

Methods

Baseline data including gender, age, pre-op weight, BMI, metabolic profile, co-morbidities, procedures performed, length of hospital stay (LOS) and the outcomes were recorded and compared to the data from the UK National Bariatric Registry.

Results

105 bariatric procedures were performed in the GHA between September 2017 to Feb 2023. Female to male ratio 81:24, average age 45.9 years. Average BMI enrolled into the program was 43.28kg/m². LOS was 5 days. Resolutions of co-morbidities including 21 out of 22 patients with hyperlipidaemia, 14 out of 16 patients in hypertension, diabetes resolved or improved in 18 out of 19 patients and reflux resolved or improved in 11 out of 13 patients. Out of the 105 cases, complications included 2 anastomotic leaks, 3 staple line bleedings and one rare case of an internal hernia with an incidental finding of a retained foreign body.

Conclusion

Despite a small population cohort, in a remote district hospital, our data reflects the UK National Bariatric Registry. Bariatric surgeries are proven to improve co-morbidities. It requires multi-disciplinary support and commitments from the clinical teams and the patients.

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BARIATRIC SURGERY AND VENTRAL HERNIA REPAIR: WHO COMES FIRST?

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Background

Ventral hernia (VH) is more prevalent among obese population. Around an 8% of patients who are candidates for a bariatric surgery (BS) have a VH. The complexity of this patients renders the management of both diseases an actual challenge. Even though there have been efforts to study the best moment for VH repair, there is still little consensus.

Objectives

The objective of this work is to review the current literature about the most appropriate timing for BS in patients with concomitant VH highlighting the necessity for further investigation in this field. Secondly we aim to report some of our experiences regarding this topic.

Methods

We conducted a review of the current literature and extracted data from reviews, systematic reviews, meta-analysis, clinical guidelines and original papers. We also present the experience in our institution regarding VH repair in obese population.

Results

Many options have been described regarding VH reparation timing in obese population, principally VH repair before, during or after BS. Each of these strategies entail pros and cons. Repairing a VH before performing a BS avoids the risk of incarceration but also entails an estimated rate of reoperation of 36%. Conversely, performing a BS before repairing the VH allows the reparation to be made in optimal wall and patient conditions but if hernia reduction is needed during the bariatric procedure, the postoperative incarceration rate rises up to a 35%. Recently there have been published reports about the possibility of performing both procedures in the same intervention. Rising evidence about the safe use of synthetic meshes in clean-contaminated fields seems to support this approach, even though there are reports of higher mesh infection in this context.

Conclusion

Our review concludes that there exists an ongoing debate and controversy around the suitable approach in patients with concomitant VH and severe obesity. The high incidence of VH in obese population demands further investigation to reach consensus.

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BARIATRIC SURGERY CAN RESOLVE METABOLICALLY UNHEALTHY OBESITY (MUO) INDEPENDENT FROM THE CHOICE OF THE PROCEDURE

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Background

Most patients undergoing bariatric surgery present one or more elements of the metabolic syndrome and can therefore be referred to as “metabolically unhealthy obese, MUHO”. Bariatric surgery may improve metabolic comorbidities and MUHO patients might switch to metabolically healthy obese (MUO) or metabolically healthy normal weight (MHN).

Objectives

Aim of this study was to assess the impact of age, sex and the operative method on the switch to metabolically healthiness in the postoperative time course.

Methods

133 Patients were included in this retrospective study. All of them underwent either RYGB or SG at our university's obesity surgery center from 03/2016 to 12/2021. For diagnosis of MHO prior to operation and up to two years after the operation the following parameters were used: a) BMI > 30 kg/m², b) systolic blood pressure (BP) < 130 mmHg, diastolic BP < 85 mmHg and no use of oral antihypertensive medication, c) TG < 150 mg/dl and no use of lipid lowering medication, d) HDL > 40 mg/dl (men) or > 50 mg/dl (women), e) FPG < 110 mg/dl, no use of hypoglycemic agents, HbA1c < 6,5 mg/dl, and HOMA-IR < 2,5, f) CRP < 5 mg/dl. Patients were considered metabolically healthy if all parameters were positive.

Results

133 MUO patients with a mean BMI 52.0 (36.9-74.8) and a mean age of 43.1 years (22-65) were included in the study. 27% were male and 73% were female. 55.6% underwent RYGB, while 44.4% underwent SG. Overall 38.3% (n=51) patients presented with metabolically healthiness in the postoperative time course of this study, while 9 patients (17.6%) switched again to MUO. Mean time to metabolically healthiness was 321 days. There were no differences in age, sex or operative procedure.

Conclusion

Bariatric surgery can resolve metabolically unhealthiness independent of age, sex or operative procedure. However, some patients might suffer from recurrence of MUO during the postoperative time course.

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BARIATRIC SURGERY IN ADOLESCENTS A NEW PARADIGM: OUR EXPERIENCE

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Background

An abnormal or excessive fat accumulation is a simple definition of Obesity, nonetheless, it can be considered a more complex disease. Obesity is a global public healthcare problem that has rapidly increased, it has nearly tripled since 1975. Over 340 million children and adolescents from 5 to 19 years old were overweight or obese in 2016. Bariatric surgery has an important role in Obesity treatment in adolescent patients.

Objective

We aim to describe characteristics, experience and outcomes of our institution's adolescent patients who underwent bariatric surgery in 2021.

Methods

A retrospective observational study with a prospective database was conducted. Adolescent (Between 10 to 19 years old (WHO)) patients who underwent bariatric intervention were included. A laparoscopic sleeve gastrectomy was performed in all of them. Baseline data and evolution were obtained and analyzed. The surgical analysis included intraoperative time, intraoperative complications, adverse events and endoscopic findings. Post-operative follow-up was done for at least a 12-month period in all patients.

Results

15 adolescent patients required bariatric surgery. The mean age of the patients was 17.5 years, 13.3 % were men and 86.7 % were women. Only 1 patient had history of diabetes and sleep apnea. Mean body mass index in the group was 42.46 kg/m² before intervention and 26.29 kg/m² year after surgery. Every patient got a GERD-Q score, under 5 points. With a satisfaction rate of 100% for weight loss. No intraoperative or intraoperative complications were recorded.

Conclusions

Bariatric surgery is a safe procedure for weight loss, it's feasible, replicable, and safe for adolescent patients. Follow-up is essential to measure GERD and weight loss maintenance.

Keywords: Obesity, Bariatric surgery, Adolescent, Childhood, Sleeve gastrectomy.

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BARIATRIC SURGERY IN DIABETICS: 15 YEARS FOLLOW UP STUDY

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Background

Bariatric surgery is known to be effective for weight loss and improvement of comorbidities at short (1-2 years) and medium term (up to 5 years). However, there is limited evidence on the long term (>15 years) effects of bariatric surgery on obese diabetic patients.

Objective

The aim of this study was to observe long term effects of bariatric surgery on obese diabetic patients, including effects on diabetes and other obesity related comorbidities.

Methods

A cohort of diabetic patients who had undergone bariatric surgery at a single centre between 2003 and 2007 were selected and preoperative data including height, weight, BMI, preoperative anti diabetic medications, HbA1c levels and fasting blood sugar levels was retrospectively collected. We also collected data related to surgical intervention and preoperative information related to other comorbidities such as anti HTN requirements and cardiac comorbidities. We collected data on these parameters 15 years post-surgical intervention. Wilcoxon signed rank test and McNemar test were used for data analysis.

Results

Total 49 diabetic obese patients (median BMI 52.6kg/m², range: 38.6-69.4kg/m²) who had undergone bariatric surgery over a period of 5 years were studied. Surgeries included 23(47%) Lap RNY Gastric Bypass (LRNYGB), 16(33%) Lap Sleeve gastrectomy (LSG), 9(18%) Lap gastric band (LGB) and 1(2%) Lap Duodenal switch (LDS). Thirteen of these patients underwent revisional surgery (8 LDS, 3 LRNYGB and 2 LSG). There was significant difference in weight(Median 143 v/s 101.65 kg, p<0.01), BMI(median 52.6 v/s 39.55 kg/m²), Oral hypoglycaemic requirement(n=27 v/s n=10,p<0.01), Insulin requirement(n=6 v/s n=3,p<0.01), requirement for anti HTN medicines (n=29 v/s n=7, p<0.01), dyslipidaemia medication (n=22 v/s n=4, p<0.01) and cardiac events(n=4 v/s n=1, p<0.01) between pre operative and 15 years post operative follow up, respectively. HbA1c (Median:8.35 v/s 5.6) and fasting blood glucose (median: 6.5 v/s 4.55) were low at 15 years follow up but data was insufficient to have conclusive results.

Conclusion

Bariatric surgery significantly improves patient's antidiabetic medication requirement and other obesity related comorbidities at long term (15 years) follow up. Larger studies with longer follow up (>15 years) and improved patient turnover are needed for better evaluation.

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BARIATRIC SURGERY IN PATIENTS WITH HYPOTHYROIDISM: THE ROLE OF LEVOTHYROXINE THERAPY

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Background

The three main causes of hypothyroidism are thyroidectomy, autoimmune thyroiditis, and radioiodine treatment. Despite the cause of hypothyroidism, the hypothyroid patient is usually managed by long-life sodium levothyroxine (LT4) therapy. However, several factors can interfere with the LT4 tablet pathway, like gastrointestinal disorders, drugs (i.e., proton-pump inhibitors, aluminum-containing antacids, calcium carbonate), as well as some foods and beverages (mainly coffee and some juices). Some papers suggested that bariatric surgery should be considered as a further reason for reduced LT4 efficacy.

Aims

The aim was to evaluate if bariatric surgery can affect LT4 performance. The primary outcome was the difference between LT4 daily dose before and 1 year after surgery. Secondary outcomes were the difference between thyroid stimulating hormone (TSH) and LT4 dose per weight before and 1 year after surgery and the impact of different LT4 preparations.

Materials and Methods

We retrospectively reviewed a prospectively maintained database of patients undergoing bariatric surgery at our institution from January 2018 to May 2022. We included patients with proven autoimmune hypothyroidism and receiving LT4 therapy before bariatric surgery. Patients were excluded in case of known malabsorption before surgery or in case of heart, renal, or hepatic failure, with recent infection, in case of pregnancy, and in case of sparse data.

Results

According to the selection criteria, 40 patients were included. One year after surgery, both TSH and LT4 daily doses were not significantly different with respect to baseline values. On the contrary, the LT4 dose per weight was significantly increased ($p < 0.001$), especially in RYGB patients. An increased LT4 dose per weight was observed with the reduction of weight.

Conclusions

One year after bariatric surgery the daily dose of LT4 remains unchanged, and despite the significant weight reduction, the LT4 dose per weight increases. Most data are referred to LT4 tablets and the performance of LT4 caps should be further investigated.

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BARIATRIC SURGERY IS SAFE IN PATIENTS WITH A HISTORY OF LONG-TERM COVID-19 INFECTIONS WITH OBESITY: INDIAN POPULATION STUDY

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Background

Bariatric surgery has been safely performed on Indian patients who made a full recovery from long-term COVID-19 infections with obesity.

Objective

This single-institutional case series is presented to highlight Indian patients who have a history of long-term COVID-19 infections, fully recovered, and subsequently underwent elective bariatric surgery.

Methods

This single-institutional case series is a retrospective chart review of patients who developed long-term COVID-19 infections, recovered, and underwent bariatric surgery. Three hundred thirty-seven patients were included, and 3-months of morbidity and mortality were analysed.

Results

337 patients with a mean age of 41 ± 2.31 years (range, 32-68 years) and a mean body mass index of 48.3 ± 4.5 kg/m² with a previous history of long-term COVID-19 complications underwent different bariatric procedures: 94 cases of sleeve gastrectomy (27.8 %), 107 cases of Roux-en-Y Gastric Bypass (31.7%), 115 cases of One-Anastomosis Gastric Bypass (34.2%) and 21 cases Endoscopic sleeve gastropasty (6.3%), respectively. The symptomatology of the previous COVID-19 long-term infections varied: 30 patients had shortness of breath symptoms, 22 had tightness in the chest, and 39 had a loss of taste and smell (for 48 ± 2.3 days). Forty-eight had muscle aches signs, 292 had a fever and respiratory signs, 45 had only a fever, 79 had diarrhoea symptoms, and 45 had isolated respiratory signs. All patients were hospitalised for COVID-19 infections for 20.8 ± 2.8 days (10-28 days). Forty-six patients were admitted to an intensive care unit and needed invasive mechanical ventilation. The mean interval from COVID-19 long-term infections to bariatric surgery was 8 ± 4.16 months (range 4-12 months). The mean hospital stay was 2.5 ± 1.5 days (range 2-5 days), and all patients were clinically evaluated three months following the bariatric procedure. These patients had relatively increased hospital stays compared to normal patients.

Conclusion

Bariatric surgery can be safely advised to patients with previous COVID-19, with additional emphasis on cardiac and pulmonary function tests, which help in early recovery and reduce complications.

Keywords: Long-term COVID-19 infections, Bariatric surgery, Obesity, Indian Population.

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BARIATRIC SURGERY: ARE WE MISSING SOMETHING?

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Background

The main issues bariatric surgery has to deal with are: 1) the characteristics of the patients mainly related to their age, severity of obesity, complexity of psychopathological status; 2) long term results; 3) invasiveness of the operation, keeping in mind new pharmacological solutions; 4) surgical modifications balancing efficacy and drawbacks; 5) the role of digestive endoscopy and the new endoluminal surgical procedures. We point to outline our attitude related to what the rapid surgical escalation may miss.

Objectives

To describe our strategy of treatment as a model to outline the puzzling world of obesity treatment showing off how a same target offers so different attitudes, representing a confounding situation for us and our patients.

Methods

Keeping in mind the forementioned key points we propose the following path of cure: 1) a mandatory interdisciplinary team (IT); 2) surgical step through gastric banding, functional gastric bypass, gastric plication, characterized by being strategies: a) codified and with long-term validation; b) tailored, less invasive, sequential; c) adjustable and reversible to overpass obesity, heading to future medical treatment avoiding any permanent side-effects; e) without limits to endoscopy.

Results

October '95 - October '22. LAGB: 4266; follow-up 10 yy 72%, 15 yy 59%, 20 yy 61%; %EWL 50, 53, 60 after yy 10, 15, 20; January 2001- January 2023: 299 laparoscopic FGB, 29 as first operation, 270 as sequential; 60% of follow-up at 20 yy; %EWL 60%. Complication: 1 post-operative anastomotic leak. Late complications are related to 3.5% of erosions; 213 GP. All our operations have been performed laparoscopically without any conversion, mortality, nor intra-operative complications.

Conclusions

We are outside the stardom. New surgical attitudes pose new rules and indications: 1) the surgeon as a performer? 2) the long-term follow-up is no more required? 3) codified operation means reproducibility? 4) from bariatric surgery to metabolic and back to malabsorption? 5) long-life side effects, acceptable counterparts? 6) what about endoscopy?

P-51

BENEFITS AND RISKS OF BARIATRIC SURGERY ON WOMEN'S REPRODUCTIVE HEALTH: A NARRATIVE REVIEW

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Background and Purpose

Bariatric-metabolic surgery (BMS) is escalating as the most efficient and durable therapy for severe obesity. Women's reproductive health is essential to women's quality of life and is receiving increasing attention. However, despite the high prevalence of BMS among women with obesity, the effect of BMS on reproductive health remains under-emphasis. The purpose of this narrative review is to provide an overview of BMS on women's reproductive health, including their reproductive health before, during and after pregnancy.

Method

Studies reporting the BMS and female reproductive health in PubMed, Cochrane Library and CNKI were searched to form this narrative review.

Result

Obesity is not only detrimental to women's reproductive health, but also increases the possibility of maternal and fetal complications. BMS can ameliorate obesity and obesity-related low fertility. Bariatric surgeons should inform patients of the possibility of fertility improvement after surgery and provide relevant contraceptive education; Until now, there is no conclusion on the best timing of pregnancy after surgery, so it is necessary to determine the timing of pregnancy according to the actual physical conditions of patients and patients' needs, and to provide strict follow-up and appropriate intervention. BMS improved some pregnancy-related outcomes, but it also had adverse effects. The special population of pregnancy after BMS deserves further attention. The complicated event of pregnancy after BMS needs the mutual assistance and joint management of multiple disciplines. Different types of bariatric-metabolic surgery have different effects on pregnancy-related outcomes, and sleeve gastrectomy seems to be a better choice for patients who intend to become pregnant.

Conclusion

Although limited attention has been given, current evidence highlights the substantial implications of bariatric-metabolic surgery on reproductive health and reminds us of the importance of adopting decision-making conversations about reproductive health before and after bariatric surgery.

P-52

BENEFITS OF UNDERTAKING A ROUTINE ENDOSCOPY PRIOR TO BARIATRIC METABOLIC SURGERY

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Introduction

Oeseophagastroduodenoscopy (OGD) is undertaken prior to Bariatric Metabolic Surgery (BMS) in order to identify pathology which might affect surgical planning. There is no consensus on whether pre-operative OGD should be carried out routinely in all patients, or selectively in symptomatic patients undergoing BMS. In our centre, we conduct pre-operative OGD routinely in all patients regardless of whether they are symptomatic.

Methods

This single centre retrospective observational study examined results of pre-operative OGD in patients undergoing BMS and whether these findings altered the surgical plan. All patients that underwent an OGD prior to sleeve gastrectomy or gastric bypass between 2019 and 2023 were included in this study. Outcome measures were medical therapy prior to surgery and/ or change in surgical plan.

Results

158 patients were included, aged between 19 and 77 years (mean 44.5, SD= 11.6). Of these, 79.7% were female. Pre-operative Body Mass Index (BMI) ranged from 31.9 to 74 kg/m² (mean 46.5, SD= 7.2). Eighty patients (50.6%) had a normal pre-operative OGD. Forty patients (25.3%) had gastritis or oesophagitis, 40 (28.4%) had hiatus hernia (HH) and 21 patients (13.3%) were found to have Helicobacter Pylori (H Pylori). Based on the OGD findings 38 patients (24.1%) were prescribed proton pump inhibitor or H Pylori eradication. Two patients (1.3%) had a delay in their surgery and one patient had their operation cancelled due to identification of a malignant tumour at the gastro-oesophageal junction. 12 patients (7.6%) had a change in planned procedure. Eight patients (5%) had additional hiatus hernia repair, three (1.9%) had a change of procedure from sleeve gastrectomy to roux-en-y gastric bypass due to reflux oesophagitis and one patient had change in operation from one anastomosis bypass to sleeve gastrectomy to allow for surveillance of a benign antral mucosal lesion. One further patient was offered a change in procedure from sleeve gastrectomy to bypass but declined.

Conclusion

In our study, almost half of the patients had significant findings identified on pre-operative OGD. One in four patients needed medical therapy and one in ten patients had an alteration to their surgical plan.

P-53

BEST PRACTICE APPROACH FOR REDO-SURGERIES AFTER SLEEVE GASTRECTOMY, AN EXPERT'S MODIFIED DELPHI CONSENSUS

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Background

Sleeve gastrectomy (SG) is the most common metabolic and bariatric surgical (MBS) procedure worldwide. Despite the desired effect of SG on weight loss and remission of obesity associated medical problems, there are some concerns regarding the need to do revisional/conversional surgeries after SG. This study aims to make an algorithmic clinical approach based on an expert modified Delphi consensus regarding redo-surgeries after SG, to give bariatric and metabolic surgeons a guideline that might help for the best clinical decision.

Methods

Forty-six recognized bariatric and metabolic surgeons from 25 different countries participated in this Delphi consensus study in two rounds to develop a consensus on redo-surgeries after SG. An agreement/disagreement $\geq 70.0\%$ on statements was considered to indicate a consensus.

Results

Consensus was reached for 62 of 72 statements and experts did not achieve consensus on 10 statements after two rounds of online voting. Most of experts believed that multi-disciplinary team evaluation should be done in all redo-procedures after SG and there should be at least 12 months medical and supportive management before performing redo-surgeries after SG for insufficient weight loss, weight regain and gastroesophageal reflux disease (GERD). Also, experts agreed that in case of symptomatic GERD in presence of adequate weight loss, medical treatment for at least 1 to 2 years is an acceptable option and agreed that Roux-en Y gastric bypass is an appropriate option in this situation. There was disagreement consensus on efficacy of omentopexy in rotation and efficacy of fundoplication in presence of a dilated fundus and GERD.

Conclusion

Redo-surgeries after SG is still an important issue among bariatric and metabolic surgeons. The proper time and procedure selection for redo-surgery need careful considerations. Although, multi-disciplinary team evaluation play a key role to evaluate best options in these situations, an algorithmic clinical approach based on the expert's consensus as a guideline, can help for the best clinical decision-making.

P-54

BILIOPANCREATIC DIVERSION WITH DUODENAL SWITCH PERFORMED TOTALLY ROBOTIC: COMPARISON TO CONVENTIONAL LAPAROSCOPY

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Introduction

A paradigm shift in the robotic platform (Si to Xi), coupled with recent introduction of the integrated robotic stapler, enable surgeons to perform complex and challenging surgeries fully 'totally' robotic. The biliopancreatic diversion with duodenal switch (DS) is among the most challenging of bariatric operations due to the procedure's complexity and patient population.

Objectives

To describe surgical outcomes of an initial series of DS surgeries performed 'totally' robotic (TR-DS) and to compare these outcomes to conventional laparoscopy.

Methods

TR-DS procedures were performed by a single surgeon using the da Vinci Xi platform. The learning curve of the initial totally robotic series was defined as the number of procedures required for stabilization of operative (op) times. Surgical outcomes included operative (op) times, peri- and post-operative complications, reoperations, 30-day readmissions and mortality rates. Surgical outcomes of the initial TR-DS series (n=24) were compared to those of a group of age-, gender- and BMI-matched patients (n=24) whose DS was performed laparoscopic (LAP-DS). Aside from differences in the surgical platform and staplers, the anatomy of the robotic DS procedure was the same as that performed laparoscopic. Both the TR-DS and matched LAP-DS patients were under identical enhanced recovery after surgery and surgical discharge programs.

Results

Patient characteristics (age, weight, BMI, gender, incidence of major co-morbidities) were nearly identical between the TR-DS and Lap-DS patients. Op times of the initial TR-DS series stabilized after the fifth procedure and, thereafter, were comparable to those of the matched LAP-DS controls (186 ± 5.7 vs. 176.5 ± 6.8 min, respectively, $p>0.05=NS$). Three 30-day readmissions and two re-operations (including the first case) occurred following the totally robotic approach in comparison to three 30-day readmissions and three reoperations with LAP-DS. LOS with the totally robotic approach was significantly ($p=0.02$) less than DS performed laparoscopic (1.24 ± 0.02 and 1.60 ± 0.14 days, respectively).

Conclusion

Totally robotic DS is safe and has a low learning curve. Surgical outcomes of the early TR series are comparable to conventional laparoscopy and time to recovery significantly less.

P-55

BIOCHEMICAL CHARACTERIZATION OF PATIENTS UNDERGOING THE ONE ANASTOMOSIS GASTRIC BYPASS TECHNIQUE: PARTIAL RESULTS

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Background

Obesity is defined by WHO as excessive body fat, capable of causing harm to an individual's health. Treatment includes both a clinical and a surgical biases. In this context, the most commonly performed surgical technique in Brazil, wich is considered a reference in bariatric surgery is the Roux-en-Y Gastric Bypass. However, this technique presents difficulties and complications for execution. So Robert Rutledge proposed a new technique called One Anastomosis Gastric Bypass (OAGB). In this sense, studies are carried out to analyze and discuss the viability, results and complications arising from OAGB, because it is a surgical technique performed in Brazil only in the scope of research. Finally, it is expected to conclude the equivalence or superiority of OAGB compared to Roux-en-Y Gastric Bypass.

Objectives

Biochemical characterization of 60 patients undergone bariatric surgery using the One Anastomosis Gastric Bypass technique, with analysis of the nutritional status of patients by checking serum levels of: albumin, creatinine, vitamin B12, hemoglobin, iron, ferritin, glucose, glycated hemoglobin and zinc.

Methods

Electronic medical records of patients who undergone bariatric surgery using the OAGB technique, between 2017 and 2019, will be retrospectively evaluated, with samples of 60 patients.

Results

Preoperatively, 20.8% of patients had high vitamin B12, 25% iron deficit, 22.5% ferritin deficit, 32.5% elevated ferritin and 71.7% zinc deficit. On the other hand, postoperatively, 19.6% of patients had high vitamin B12, 27.5% iron deficit, 20% ferritin deficit, 32.5% high ferritin and 67.3% zinc deficit.

Conclusion

One Anastomosis Gastric Bypass is a new and experimental technique, with limited and short-term results. In this sense, it is observed that nutritional alterations are identified, such as iron and ferritin deficiency, in addition to zinc deficiency. However, these are expected changes in bariatric surgeries, depending on the Roux-en-Y Bypass. In short, OAGB has less frequent and intense alterations than those exposed in Roux-en-Y Gastric Bypass. That said, long term studies with larger casuistry are necessary to confirm the viability of OAGB, through its benefits and its complications; as well as its equivalence or superiority to the classic bypass.

P-56

CAN ENDOSCOPIC PROCEDURES LIKE BALLOONS AND ENDOSCOPIC SLEEVE GASTROPLASTY HELP IN INCREASING BARIATRIC SURGERY PRACTICE?

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Introduction

Endoscopic procedures like a balloon and endoscopic sleeve gastroplasty (ESG) can help increase the number of bariatric procedures performed. These endoscopic procedures are less invasive than traditional bariatric surgery and may appeal to patients who are hesitant to undergo more invasive surgery. Balloon procedures involve placing a temporary balloon in the stomach to create a feeling of fullness, which can help patients lose weight. ESG is a newer procedure that involves reducing the size of the stomach using an endoscope and suturing techniques. If the patients with these less-invasive procedures have weight regain in future will have the confidence to undergo surgery. This way, these less-invasive procedures might help in bariatric surgery practices.

Results

656 patients underwent a swallow pill procedure, and 236 underwent an endoscopic sleeve. All these patients were counselled for bariatric surgery and were clearly explained the superiority of bariatric metabolic surgery over a swallow balloon or endoscopic sleeve. But due to the perceived invasiveness of the procedure, they refused to undergo bariatric surgery and chose a lesser invasive balloon or endoscopic sleeve. Out of the swallow pill group, 45 patients underwent bariatric surgery at an average duration after the balloon was out at seven months. Forty-three patients underwent bariatric surgery nine months on average duration after endoscopic sleeve. 100% of patients accepted that due to the benefits of 10 % total weight loss by lesser invasive devices, their faith increased in bariatric procedures, and now they underwent more definitive therapy.

Conclusion

A lesser invasive procedure ropes in morbidly obese patients to bariatric practice as a future surgery candidate.

Keywords: Endoscopic, Endoscopic sleeve gastroplasty, Balloon, Bariatric procedures.

P-57

CAN RAPID UREASE TEST BE MORE SENSITIVE THAN HISTOPATHOLOGY SPECIMENS IN DETECTING H. PYLORI INFECTION AMONG THE BARIATRIC POPULATION?

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Background

The aim of the study was to establish the prevalence of *Helicobacter pylori* (*H. pylori*) infection among bariatric patients and to check the accuracy of the commonly used Rapid Urease Test (RUT) as a diagnostic test.

Methods

A retrospective analysis was performed among patients with obesity undergoing bariatric surgery. As part of the preoperative work-up esophagogastrosocopy (EGD) was performed with RUT using Lencomm GOLD Hp dry CLO test and a histopathology sample taken from the gastric antrum. All patients stopped proton pump inhibitors (PPI) at least 10 days before the procedure. The gold standard test for *H. pylori* infection was histopathology. The positive predictive value (PPV), specificity, and sensitivity of RUT were analyzed.

Results

Data from 145 patients were analyzed (64% females), with a mean age of 41,0. 76 (52,41%) of patients had signs of gastritis in EGD, while only 11 (7,59%) experience symptoms. 37 (25,52%) patients had positive Rapid Urease Test results, of which histopathology results confirmed the presence of *H. pylori* in 28 cases. PPV = 87,50%, sensitivity 96,55%, specificity = 94,94%. 26 (70,27%) of those patients had macroscopic changes in EGD, but only 3 patients (8,11%) were symptomatic. 4 patients had positive RUT test while negative *H. pylori* result in the histopathology sample. 3 of them had macroscopic and microscopic signs of chronic active non-atrophic gastritis.

Conclusions

The accuracy of *H. pylori* detection with the Lencomm GOLD Hp dry CLO test in patients who abstain from PPI treatment is very high and comparable to histopathology results. RUT may be more sensitive in detecting *H. pylori* infection than histopathology samples in the bariatric population.

P-58

CAUSAL ASSOCIATION BETWEEN BODY MASS INDEX AND NEUROIMAGING FEATURES IN ADULT POPULATION

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Background

High body mass index (BMI) is related to negative brain health, but its causal association in different ages remains unclear.

Objectives

This study aimed to evaluate the effect of high BMI on neuroimaging features in different age groups and validate the causal relationship.

Methods

A real-world study was performed based on the KaiLuan Study. We modeled BMI trajectories during follow-up to evaluate cumulative exposure. Multimodality neuroimaging data were collected using 3.0T magnetic resonance imaging since 2020. Changes of volumetric measurements of the brain structure, white matter hyperintensity, and skeletonized white matter tract at the voxel-wise level in subgroups with different ages were fully analyzed. We performed two-sample Mendelian randomization analysis to further analyze the causal relationship between BMI and neuroimaging features.

Results

Clinical and neuroimaging data were obtained from 1,074 adults aged 25–83 years. For adults aged <45 years, differences in cerebral parenchyma volume between those with BMI >26.2 kg/m² and those with normal BMI corresponded to 12.0 years (95% confidence interval, 3.0 to 20.0) of brain aging. Volumetric results corresponded to -17.9 ml (95% confidence interval, -29.8 to -4.5). Differences in white matter hyperintensity were statistically significant for participants aged >60 years, with 6.0 ml (95% confidence interval, 1.5 to 10.5) increased volume. Genetic analysis of 681,275 individuals indicated causal relationships between high BMI, decreased volume of the cerebral parenchyma and gray matter, and increased fractional anisotropy in projection fibers, further supporting the causal negative effect of BMI on brain health.

Conclusion

The cross-talk between real-world and genetic evidence indicated that BMI is causally associated with decreased brain volume and disrupted microstructural integrity. Brain aging is prominent in young adults with a high BMI.

P-59

CHANGES IN GUT MICROBIOTA AFTER DISTAL GASTRECTOMY WITH LONG-LIMB ROUX-EN-Y RECONSTRUCTION IN PATIENTS WITH GASTRIC CANCER AND TYPE 2 DIABETES: A POTENTIAL REMEDY TO TREAT TYPE 2 DIABETES

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Background

Metabolites produced by gut microbiome, such as short-chain fatty acids (SCFA), secondary bile acids, are known to have a positive effect on T2D improvement. Yet, the impact of altered gut microbiome resulting from surgical small bowel re-routing on T2D remains unclear. In this study, we employed shotgun metagenomics sequencing to investigate the effects of long-limb Roux-en-Y reconstruction after distal gastrectomy on gut microbiota and to explore how these changes impact T2D improvement.

Methods

A total of 30 patients with stage I gastric cancer and type 2 diabetes were prospectively recruited for a randomized controlled trial comparing long biliopancreatic limb (BPL) vs. short BPL reconstruction after standard distal gastrectomy. Stool samples from 12 patients among them were available for the present collateral study. After standard distal gastrectomy, gastrointestinal continuity was restored with long-limb Roux-en-Y reconstruction method (BPL + Roux limb = 150cm), and fasting blood glucose (FBG), BMI, and glycated hemoglobin levels (HbA1c) were collected, before and 3 months after the surgery. The stool samples were also collected at the same time points for shotgun metagenome sequencing. The data generated through sequencing were analyzed for taxa and function profiling through an in-house pipeline.

Results

The HbA1c level confirmed that T2D was improved after surgery, meanwhile, the gut microbial diversity was also significantly changed. In taxonomic analysis, the abundance of *Lactobacillus* spp. and *Bacteroides fragilis* species, which are known as potential probiotics, were increased after surgery. Analysis also showed a significant increase in metabolism pathways including secondary bile acid biosynthesis and SCFA production. Further, microbial genome-level analysis (Genome binning) showed increased *Lactobacillus* and *Akkermansia* species levels after surgery and found several genes, including genes associated with mucin or carbohydrate degradation.

Conclusions

Long-limb Roux-en-Y reconstruction after distal gastrectomy changed gut microbiota by increasing *Lactobacillus*, *Akkermansia*, *B. fragilis*, and their metabolism-related pathway. Our results suggest that long-limb Roux-en-Y reconstruction can be used to treat T2D through gut microbial community.

P-60

CHANGING TRENDS OF BARIATRIC REFERRALS DUE TO SURGICAL TOURISM, EXPERIENCE FROM A BARIATRIC TERTIARY REFERRAL CENTRE IN THE UK

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Background

The fact that having Bariatric Surgery on the National Health Service in the UK means stringent selection criteria, robust preoperative preparation involving a multidisciplinary team and lengthy waiting times has led UK patients to travel across international borders in search of swift, low cost Bariatric Surgery.

Objectives

To look at the changing profile of Post Operative Bariatric Referrals in order to understand the trends of Bariatric Surgical Tourism and its effects on our service.

Methods

We collected data from electronic referral service (eRS) alongwith email referrals over a period of two years between March 2021 till March 2023. Also, we had devised a Post Operative referral proforma to be filled in by the General Practitioners (GP). So we were able to identify at the time of referral, the indications for referral, most popular Bariatric Surgical procedure, most popular destination for surgery and if the referring GPs were familiar with the British Obesity Metabolic Surgery Society (BOMSS) guidance on the management of post operative patients in the primary care.

Results

Between March 2021 and March 2022 a total of 163 referrals were vetted with 27(16.5%) of the proformas received. Between April 2022 and March 2023 a total of 292 referrals were vetted with 99 (34%) of the proformas received. A review of the 99 proformas received in the last year showed 3 were inadequately filled. 77/96 (80%) of the GPs were familiar with BOMSS guidelines. 26/96 (27%) of the patients were referred for symptoms such as abdominal pain, vomiting or reflux. 62/96 (65%) of the patients were referred for a routine nutritional follow up with the Bariatric Dietitians. Commonest procedure was Laparoscopic Sleeve Gastrectomy 65/96 (68%). Most popular destination for surgery was Turkiye 52/96 (54%).

Conclusion

Increasing number of patients are travelling across international borders to have Bariatric surgery. Upon return there is a significant burden, more so on the Allied Health Professional (AHP) Dietetic Services and to a lesser extent on the Surgical teams. A review of the policies and resources to manage increasing influx of Post Operative Bariatric referrals is required.

P-61

CHARACTERISING BARRIERS AND FACILITATORS THAT INFLUENCE BARIATRIC TOURISM: A SYSTEMATIC REVIEW

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Background

The rise of bariatric tourism (BT) presents a growing concern for bariatric surgeons worldwide. Patients who experience complications from BT often face numerous challenges, especially when the surgery is performed distant from their home country.

Objectives

To identify the barriers and facilitators that influence individuals to seek BT and explore the resulting implications for the NHS.

Methods

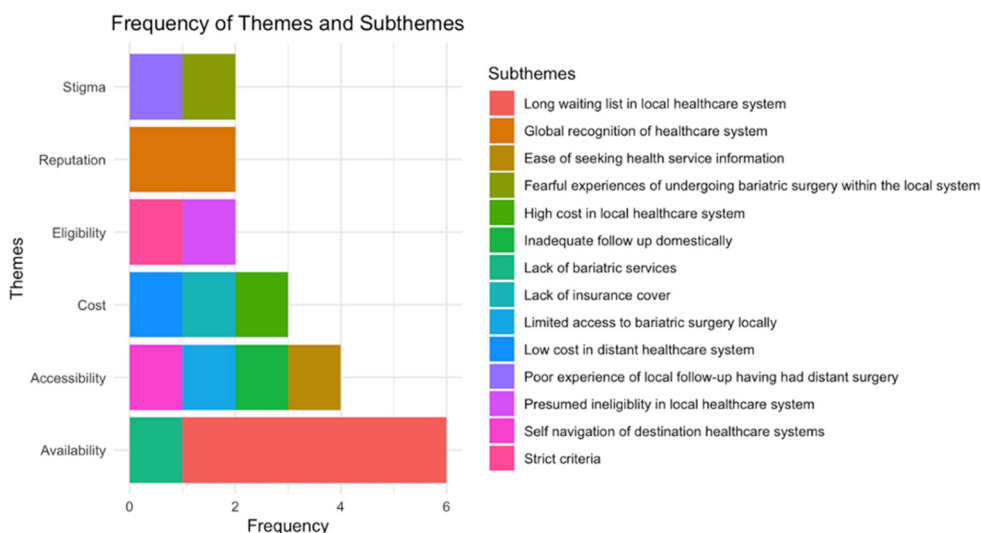
A systematic literature search, limited to English language publications, was conducted with the assistance of an expert librarian. All studies up to December 2022 were included, and study quality was assessed using the validated Mixed-Methods Appraisal Tool. Braun and Clarke Thematic analysis was employed to identify themes.

Results

Five studies met the inclusion criteria; themes are shown in Fig 1. A table will be provided with included study characteristics and limitations. Overall, the quality of included studies varied significantly.

Conclusion

This research emphasizes the scarcity of literature exploring the complex motivations, scale of the issue within the current healthcare system, cost, and long-term outcomes. Future studies should focus on generating more robust data, such as through a National Emergency Bariatric Surgery audit, to enable better economic cost evaluations. Further exploration of clinical relationships and networks is needed to inform policy making.



P-62

CHARACTERISTICS OF ANTI-REFLUX FUNCTION AND CORRELATION WITH METABOLIC PARAMETERS IN PATIENTS WITH OBESITY BEFORE BARIATRIC-METABOLIC SURGERY

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Background

Obesity is a risk factor of gastroesophageal reflux disease (GERD). Higher intra-abdominal pressure and thoraco-abdominal pressure gradient (TAPG) especially are known as factors of developing for GERD in patients with obesity. However, data of anti-reflux function evaluated on high-resolution manometry (HRM) in patients with obesity are still limited. Furthermore, the data on HRM correlated with metabolic parameters are still lacking.

Objectives

Aims of this study are to investigate characteristics of anti-reflux parameters on HRM in patients with obesity compared to non-GERD population without obesity. Furthermore, we evaluated correlation between metabolic parameters and the data of HRM.

Methods

First, HRM findings were compared between patients with obesity ($n=35$, $BMI \geq 30 \text{ kg/m}^2$) who underwent HRM before bariatric-metabolic surgery and control populations ($n=43$, $BMI < 30 \text{ kg/m}^2$ without GERD) in our institution from Jul 2018 to Feb 2022. Second, we evaluated correlation between metabolic parameters (body mass index: BMI, visceral-to-subcutaneous fat ratio: VSR) and anti-reflux parameters (lower esophageal sphincter pressure: LESP, esophagogastric junction contractile integral: EGJ-CI, distal contractile integral: DCI, TAPG) in patients with obesity. Statistical significance was set at $p < 0.05$.

Results

HRM revealed manometric hiatal hernia in 3 patients (8.6%) in obese group. LESP and TAPG were significantly higher in obese group than in control group, respectively (36.4 vs. 33.2 mmHg, 12.8 vs. 8.5 mmHg, $p=0.02$, <0.001). There were no significant differences in EGJ-CI and DCI, respectively (77.0 vs. 62.8 mmHg-cm, 2284 vs. 1830 mmHg-s-cm, $p=0.059$, 0.05). In obese group, there was significantly positive correlation between VSR and TAPG ($r=0.35$, $p=0.044$), whereas the correlation between the BMI and TAPG showed no significant difference ($r=-0.27$, $p=0.12$).

Conclusion

LESP and TAPG were significantly higher in patients with obesity. TAPG correlated positively with not VSR but BMI.

P-63

CHINESE BARIATRIC SURGEON'S VIEW ON THE AND INTRAOPERATIVE DIAGNOSIS AND TREATMENT OF HIATAL HERNIA DURING BARIATRIC SURGERY

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Background

Currently, sleeve gastrectomy (SG) is the most frequently performed bariatric procedure worldwide. However, existing evidence implies that SG may induce de novo or worsen the gastroesophageal reflux disease (GERD). In accordance with this issue, several studies have suggested investigating the presence of “Hiatal Hernia (HH)” and the prospect of performing “Hiatal Hernia Repair (HHR)” in addition to the SG.

Objectives

Based on the guidelines for the management of HH, HH can be defined as “*a protrusion of abdominal organs excluding the esophagus into the thoracic cavity through a broadening of the hiatus of the diaphragm*”, and is further classified into four types: *type I HH* (sliding hiatal hernias), *type II HH* (true paraoesophageal hernias, PEH), *type III HH* (combination of types I and II), and *type IV HH*.

Methods

Available literature searching and personal experiences.

Results

Repair by suturing has been the core of practice for decades; however, studies with objective follow-up reported high recurrence rate of 42% [4]. When considering the most appropriate treatment strategy, it is important to understand better the type of HH, as well as the degree/size of the defect, as studies have shown that HH with higher surface area is better treated using mesh reinforcement [7, 8]. Recent meta-analysis in bariatric surgery has reported the recurrence rate of HH of 11% following SG and HHR without mesh reinforcement [3]. Unfortunately, most studies have failed to mention further detail of the degree of the defect observed during SG intraoperatively.

Conclusion

In our modest personal experience of performing more than 2000 bariatric surgeries (about 65% SG), we have intraoperatively found many patients with weakening or loosening of the phrenoesophageal ligament. However, we have not faced bariatric patients with abdominal contents migration (true HH). From our perspectives, loosened phrenoesophageal ligament without contents migration can be effectively treated with suturing and without the need of mesh reinforcement. However, mesh reinforcement might be necessary in patients with true HH.

P-64

CLINICAL & ENDOSCOPIC EFFECTS OF ONE- ANASTOMOSIS-GASTRIC BYPASS ON PATIENTS WITH GERD AND ESOPHAGITIS

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Introduction

One-Anastomosis-Gastric-Bypass (OAGB) is the third most common Bariatric procedure after laparoscopic sleeve gastrectomy (LSG) and Roux en Y gastric bypass (RYGB). The incidence of GERD and reflux oesophagitis has been seen to increase significantly especially after LSG however not as much in RYGB therefore it may be presumed that the effects of OAGB may not be as adverse as after LSG.

Aim of the study

The aim of the study is to review whether pre-endoscopic findings of GERD improve after LOAGB in order to further improve therapeutic management.

Methods

We reviewed all patients who underwent OAGB in our unit and who have been previously have GERD or esophagitis on preoperative endoscopy. Patients were interviewed for symptoms, quality of life and other symptoms. Endoscopy was repeated also to assess any changes after OAGB.

Results

Data showed improvement of symptoms of GERD among most patients. Endoscopy revealed resolution of preoperative findings in 78% of patients, partial improvement in 14% and no change in 8% of patients.

Conclusion

OAGB seems to be safe in patients with preoperative esophagitis and GERD. Further larger studies with endoscopy, pH manometry and other objective techniques are needed to confirm our results.

P-65

CLINICAL APPLICATION AND CHALLENGES OF SPECIALIZED BOUGIE IN METABOLIC AND BARIATRIC SURGERY: A NATIONWIDE CROSS-SECTIONAL SURVEY

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Background

Bougie is an essential tool for achieving optimal sleeve size or pouch creation in metabolic and bariatric surgery (MBS).

Objectives

The purpose of this study was to investigate the clinical application and associated challenges of specialized Bougie in MBS in China, identify targeted solutions, and guide clinical practice.

Methods

A survey questionnaire was developed through a webinar with MBS experts. The questionnaire was distributed online to MBS centers throughout China between March 9 and 15, 2023. Statistical analyses were performed to evaluate the responses.

Results

The survey received 183 valid responses from 28 provinces (including autonomous regions and municipalities) in China. Overall, 86.34% of the centers reported using specialized Bougie for MBS, and 79.23% of these centers reported frequent use. Among the frequently used centers, 40.51% reported reusing Bougie after disinfection due to the high cost of purchasing new ones. The most commonly used Bougie tube size was 36Fr in laparoscopic sleeve gastrectomy and laparoscopic gastric bypass, with other centers using sizes ranging from 30-38Fr. However, 41.53% of the centers reported Bougie tube-related complications, with tension rupture and esophageal injury being the most common.

Conclusions

This nationwide survey provides an overview of the current clinical application and challenges of specialized Bougie in MBS among centers in China. Further efforts are necessary to improve healthcare professionals' knowledge of Bougie, establish standards, and promote its standardized use through targeted education and training to prevent complications and optimize patient outcomes.

Keywords: bariatric surgery; metabolic surgery; Bougie; calibration tube; sleeve size; pouch creation.

P-66

CLINICAL SIGNIFICANCE OF THE PROGNOSTIC NUTRITIONAL INDEX FOR PREDICTING SURGICAL OUTCOMES AFTER BARIATRIC SURGERY

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Background

To evaluate the predictive and prognostic significance of the prognostic nutritional index (PNI) in morbid obese patients who underwent bariatric surgery. Assessing a patient's immune and nutritional status, PNI has been reported as a predictive marker for surgical outcomes in various types of operation.

Methods

We retrospectively reviewed data from a prospectively maintained database of 46 morbid obese patients who underwent bariatric surgery from January 2019 to December 2022 at a single center. From this data, we analyzed clinical characteristics, technical aspects of the operation, PNI, and results concerning morbidity for each patient. We used the PNI value for the mean (59.8) of the study cohort as a cut-off for dividing patients into low and high PNI groups.

Results

Mean follow up period was 12.9 months. Mean serum albumin level and lymphocyte count were 4.63 g/L and $2.685 \times 10^9/L$, respectively. Morbidities were noted in 3 patients (6.5 %) which were related to acute or delayed stapler line dehiscence. These morbidities significantly associated with low PNI status.

Conclusion

PNI can be used to predict patients at increased risk of postoperative morbidity and mortality. Pre-operative PNI with the advantages of being convenient, noninvasive, and reproducible was a useful prognostic indicator.

P-67

COHORT PROFILE: A SINGLE CENTER BARIATRIC SURGERIES EXPERIENCE

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Background

Since 1990s the number of bariatric surgeries has dramatically increased, including the number of bariatric centres worldwide. There is a need to share experiences from different centres.

Objective

We aim to share our experiences in the trends of bariatric surgery and the change in utilisation by the type of surgery using single-centre data.

Materials and Methods

The records of patients who underwent bariatric surgery in our high-volume centre between June 2010 and November 2022 were reviewed retrospectively. Demographic characteristics of the patients, trends and progress of bariatric and metabolic surgeries, weight loss patterns, and pre-and post-operative follow-up stages were examined in detail.

Results

21205 patients underwent bariatric surgeries over 12 years. Sleeve Gastrectomy (SG) was performed in 6136 patients. Roux-n-Y Gastric Bypass (RYGB) was performed in 5878 patients, One Anastomosis/Mini-Gastric Bypass (OAGB/MGB) was performed in 7678 patients, Endoscopic sleeve gastroplasty (ESG) was performed in 941 patients and Allurion swallow balloon (SB-572). The operation time ($p < 0.001$) and the intraoperative blood loss ($p < 0.001$) in RYGB were significantly higher than in OAGB-MGB and SG. The difference was insignificant regarding the length of hospital stay ($p = 0.233$) and drained usage ($p = 0.953$). At the same time, intraoperative complications occurred in 0.7% of patients in SG, 1.2% in RYGB and 0.9% OAGB-MGB ($p < 0.001$). There was no significant difference in Clavien Dindo class 3 and higher complication rates between the groups ($p = 0.882$). Mortality was seen in only 0.08% of patients.

Conclusion

Today, standard techniques are applied in three (SG, RYGB and OAGB-MGB) procedures. Regardless of the technique, laparoscopic bariatric surgery can be applied as an effective and safe method in treating morbid obesity until an alternative treatment is found.

Keywords: Bariatric Surgery, Obesity, Weight-loss, Sleeve Gastrectomy, Roux-n-Y Gastric Bypass, One Anastomosis/Mini-Gastric Bypass.

P-68

COMBINATION THERAPY OF GLP-1 ANALOGUES WITH SWALLOWABLE BALLOON FOR TREATMENT OF OBESITY

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Background

New approaches are identified for weight management. Where lifestyle interventions fail to promote adequate weight loss, a new emerging Ellipse Swallowable (ES) balloon process is a non-surgical approach offering a powerful alternative. Semaglutide, the first oral medication, helps with chronic weight management. It works best when used in combination with a healthy diet and exercise. In this study, we have compared the effectiveness of weight reduction in ES therapy and ES therapy with the combination of semaglutide oral formulation.

Methodology

We did a blocked randomisation, double-blind single-centre study. A total of 117 patients were selected who underwent ES-balloon between November 2021 to February 2022. 58 participants were assigned to ES-balloon therapy group-I (without semaglutide), and 57 were assigned to ES-balloon therapy group II (with semaglutide). All treatment doses were delivered once daily orally (3mg-7mg followed by 14mg for the 3rd and the 4th month). The primary data was percentage weight loss with the resolution of comorbidities, adverse events, and changes in the quality of life at four months.

Results

The groups were well-matched (mean age 42.2 and 41.3 years, BMI was 37.8 and 37.2) at baseline for all relevant characteristics. All group-I versus group-II were significant (unadjusted $p \leq 0.0010$) and remained significant after adjustment for multiple testing ($p \leq 0.0042$). The total weight loss percentage was in group-I (7.03-10.64-12.99 and 14.30) versus group II (8.41-12.04-15.22 and 18.31) at 1-2-3 and four months, respectively. Estimated weight loss of 4 to 5% or more occurred with the combination of semaglutide compared to group-II ($p < 0.0001$ vs ES-balloon process without semaglutide). All semaglutide doses were generally well tolerated, with no new safety concerns. The most common adverse events were primarily nausea and vomiting during the initial week. Resolution of T2DM, HTN and OSA were 61.4%, 67.3% and 56.3% vs 69.5%, 71.2 vs 66.1% in group-I vs group II, respectively. No major late complications occurred in either group.

Conclusion

ES-balloon combined with semaglutide was well tolerated over four months and showed clinically relevant better weight loss with all doses compared with ES-balloon without semaglutide group.

Keywords: Elipse Swallow (ES) balloon; Semaglutide; Weight loss; Obesity.

P-69

COMBINED BILIARY LIMB DISTALIZATION AND TRANSORAL OUTLET REDUCTION ENDOSCOPY (TORE): A CASE SERIES

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Background

Revisional procedures for weight regain (WR) after Roux-en-Y gastric bypass (RYGB) has been increasing. Biliary limb distalization (BLD) and transoral outlet reduction endoscopy (TORe) are two such procedures. BLD is a surgical procedure that involves lengthening of the biliopancreatic limb while shortening the common channel with a reported percentage total body weight loss (%TBWL) at 12 months of 25.4±4.4%. TORe is a safe and effective endoscopic treatment that utilizes a suturing system to plicate and reduce the size of the gastrojejunal anastomosis, reported %TBWL at six months is 9.5±1.5%.

Objectives

To determine the technical safety and feasibility of a single-stage combined BLD and TORe for WR following RYGB. The primary outcome was %TBWL at 6 months. Secondary outcomes were technical success, and adverse events (AEs).

Methods

Three patients underwent a single-stage combined BLD and TORe for WR following RYGB between October 2021-May 2022. Post-operatively, patients were started on a clear liquid diet and gradually advanced to a regular diet over 4-6 weeks. Pain was controlled with oral pain medications and patients were discharged within 48 hours. %TBWL at 1, 3, and 6 months were calculated based on baseline weight.

Results

All patients were Caucasian, two were female and mean age was 68±5.5 years. Baseline body mass index (BMI) was 45.13±1.1. The procedure was technically successful in all three patients with a mean total time of 160±21.8 minutes, for the combined procedure (Table 1). %TBWL at 1, 3, and 6 months was 5.6±3.4%, 8.5±5.4%, and 13±4.9% respectively. None of the patients had intra or post procedure complications or serious AEs.

Conclusion

Single-stage combined BLD and TORe is safe, and technically feasible. Further studies with longer follow-up are needed to determine if this paradigm-changing approach of combined endoscopic and surgical procedures for the management of WR following RYGB is superior to TORe alone.

Table 1. Patient and procedure characteristics.

Age (years)/sex	Nadir weight after RYGB (kg)	Baseline weight (kg)	BP limb/ Alimentary limb/ Common Channel (cm)	Gastrojejunal anastomosis (mm)	%TBWL at 6 months (%)
67/F	104.3	116	120/150/440	40	11.2
63/F	96.1	125	120/130/460	30	9.2
74/M	100	129	120/240/390	20	18.6

P-70

COMBINED THORACIC SPINAL EPIDURAL ANESTHESIA FOR LAPAROSCOPIC SLEEVE GASTRECTOMY; ONE HUNDRED AND FIFTY CASES

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Background

Obesity is a growingly impacting human health concern. Laparoscopic sleeve gastrectomy (LSG) is an effective treatment for morbid obesity. However, the general anesthesia (GA) used in this major surgery has its documented drawbacks in obese patients with high risk. On the other hand, combined thoracic spinal-epidural anesthesia (CTSEA), a modern regional anesthesia procedure, has the advantages of both spinal and epidural anesthesia but without their shortcomings. This prospective study is a case experience that assesses the feasibility of CTSEA as an anesthesia option for laparoscopic sleeve gastrectomy (LSG).

Methods

A total of 150 patients were recruited for LSG as a management procedure for morbid obesity, which was performed under CTSEA. Perioperative events, functional parameters, and patients' satisfaction scores were recorded.

Results

Our prospective study showed successful use of CTSEA in 99% of the patients, except for one patient (1%) in whom CTSEA was converted into GA due to severe pain and anxiety. Few adverse events occurred and were managed accordingly. The satisfaction score revealed that 94% of the patients were satisfied.

Conclusions

CTSEA was a successful anesthetic alternative procedure for LSG surgery.

Keywords: Morbid obesity, Laparoscopic sleeve gastrectomy, Combined thoracic spinal-epidural anesthesia.

P-71

COMBINING GASTRIC BYPASS WITH PRIMARY FUNDOPLICATION REDUCES THE INCIDENCE OF DUMPING SYNDROME: A RANDOMIZED CLINICAL TRIAL

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Background

The dumping syndrome is a common problem after gastric bypass surgery and often requires revision surgery. Due to the technical complexity of the fundoplication as a revision procedure after gastric bypass, it is rarely performed, despite reports of its effectiveness.

Objectives

To compare the incidence of dumping syndrome in obese patients after one anastomotic gastric bypass (OAGB) with primarily modified fundoplication and without fundoplication.

Methods

The study design was a multi-center prospective, interventional, open-label randomized clinical trial with 1-year follow-up. Endpoints were cases of dumping syndrome. We use the test using a 50-gram oral glucose challenge following a 10-hour fast. After oral glucose intake measured heart rate. Test considered positive if the heart rate increases by ten beats or more per minute in the first hour.

Results

100 patients (n=50 Fundo+OAGB [f-OAGB] vs n=50 standard OAGB [s-OAGB]) with complete 1-year follow-up data were included in the study. All 100 patients included in the study completed it and were available for analysis one year after surgery. There were no leaks, bleeding, or deaths in any of the groups. The dumping syndrome was observed in 11/50 patients in the s- OAGB group versus 2/50 cases in the f- OAGB group ($\chi^2=5.5$, $p = 0.018$), and late dumping syndrome (hypoglycemia) was observed in 6/50 patients with OAGB versus 0/50 cases in the f- OAGB group ($\chi^2=5.7$, $p = 0.017$).

Conclusion

The use of a modified fundoplication simultaneously with gastric bypass leads to a decreased incidence of early and late dumping syndrome.

P-72

COMPARATIVE ANALYSIS OF CHANGE IN GLUCOSE METABOLIC INDICES BETWEEN PATIENTS WITH/WITHOUT TYPE 2 DIABETES BEFORE AND AFTER ROUX-EN-Y GASTRIC BYPASS

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Background

There were a few studies on the changes of glucose metabolic indices before and after metabolic surgery. We investigated the changes of glucose metabolic indices in patients with/without type 2 diabetes by oral glucose tolerance test, before and after Roux-en-Y gastric bypass (RYGB). Method: All patients were performed RYGB from January 2011 to June 2019. A 75g oral glucose tolerance test, insulin level, C-peptide levels were collected regularly at preoperative and post 1 week, 3 month, and 1 year. We collected prospectively patients' clinical data and reviewed retrospectively the medical records.

Result

1. Among 44 patients, 23 patients were non T2DM and 21 were T2DM patients. Non T2DM patients were younger and body mass index was higher (40.2 ± 4.3 vs. 36.6 ± 6.2). Insulin resistance was not different between the two groups. Preoperative insulin secreting function was significantly higher in the non T2DM group (1.61 ± 1.01 versus 0.28 ± 0.28 ; $p<0.001$) and the difference was greater since 3 months after RYGB.
2. Among 21 T2DM patients, 9 patients (42.9%) achieved T2DM complete remission status. The remission group has shorter duration of T2DM. (3.33 ± 3.43 versus 9.67 ± 6.17 ; $p=0.012$) Insulin resistance was not different, but insulin secreting function was significantly higher before and after RYGB in the T2DM remission group.
3. Calculating ROC curve of preoperative insulinogenic index for T2DM remission, cutoff value of preoperative insulinogenic index for predicting T2DM remission was 0.295. The sensitivity was 0.667 and specificity was 0.833 and the AUC of the curve was 0.852.

Conclusion

The degree of improvement of insulin resistance did not show difference in three groups. As for insulin secreting function, the degree of improvement was highest in non T2DM group and followed by remission group. preoperative insulinogenic index may be a predictor for T2DM remission.

P-73

COMPARATIVE OUTCOMES OF TOTALLY ROBOTIC VERSUS LAPAROSCOPIC PRIMARY BARIATRIC SURGERIES

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Background

Previous meta-analyses and registry reports find that primary surgeries performed robotic have similar outcomes to conventional laparoscopy but with longer operative times and higher costs. Most of the robotic surgeries in these reports have been robot-assisted rather than totally (fully) robotic. The introduction of robotic staplers and conversion of the robotic system to the Xi platform now allow surgeons to perform bariatric surgeries fully ‘totally’ robotic.

Objectives

To compare surgical outcomes of primary bariatric surgeries performed totally robotic (TR) and laparoscopic (LAP).

Methods

The study is a retrospective analysis of 274 totally robotic (TR) and 273 laparoscopic (LAP) primary bariatric surgeries (40% Roux-en-Y gastric [RYGB] and 60% sleeve gastrectomy [SG]) performed by a single surgeon between January 1, 2020 and December 30, 2022. Outcome measures included: 1) patient characteristics (age, weight, BMI, gender), 2) total number and incidence of preoperative co-morbidities, 3) operative time, 4) length of hospital stay (LOS), 5) complications, readmissions, and reoperations.

Results

Characteristics of the TR and LAP patients were nearly identical, i.e. age = 45.6 vs. 45.1 y, respectively; BMI = 46.0 vs. 45.7; number co-morbidities = 2.73 and 2.73. Operative times did not differ significantly between the TR and LAP approaches (74.6 vs. 79.7 min, respectively). LOS, however, was significantly ($p < 0.0001$) less following surgeries performed totally robotic (1.16 d TR vs. 1.31 d LAP), as were peri- and postoperative (30-d) complication rates (1.82% TR vs. 4.40% LAP). With the SG, there were no significant differences between the TR and LAP approaches for operative times, but TR LOS was significantly ($p < 0.0001$) less (1.13 d TR vs. 1.31 d LAP). With the RYGB, operative times were significantly lower for the totally robotic approach (99.6 min TR vs. 115.1 min LAP, $p < 0.0001$) and LOS was significantly less (1.18 d vs. 1.38 d, $p < 0.0001$).

Conclusions

Primary bariatric procedures performed totally robotic are as safe as conventional laparoscopy and have fewer complications, a faster rate of recovery, and, for the RYGB, shorter time in surgery.

P-74

COMPARATIVE OUTCOMES OF TOTALLY ROBOTIC VERSUS LAPAROSCOPIC REVISIONAL BARIATRIC SURGERY

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Background

Revisional bariatric surgery (RBS) is more challenging and riskier than primary surgery. The robotic system improves surgeon precision with technically demanding surgical procedures and may be advantageous for revisional interventions. Over the past several years, there has been a steadily increasing number of robot-assisted RBS procedures performed but such studies have found conflicting results as to robotic advantage. Only a few comparative robotic versus laparoscopic RBS cohort studies have been performed and, to our knowledge, none with fully 'totally' robotic procedures.

Objective

To compare our early totally robotic RBS series (TR-RBS) to RBS performed laparoscopic (LAP-RBS).

Methods

The study included our initial series of 66 TR-RBS cases and 59 LAP-RBS. A variety of revisional bariatric operations were performed including index surgery conversions (92%) and revisions (8%). Principal RBS indications included morbid obesity, weight regain, co-morbidities, and severe gastrointestinal reflux disease (GERD). The most frequently performed RBS (60% of surgeries) was a sleeve gastrectomy (SG) conversion to Roux-en-Y gastric bypass (RYGB) for severe GERD (91% of cases). Outcomes included patient characteristics (age, BMI, gender, co-morbidities), operative times, conversions, 30-day readmissions/reoperations, and length of hospital stay (LOS).

Results

Characteristics (age, BMI, gender, incidence of co-morbidities) of the TR-RBS and LAP-RBS patients were nearly identical, as were operative times (161.4±5.6 vs. 164.7±6.7 min, respectively). There were no conversions, no leaks and no mortalities with either surgical approach. With the TR-RBS, seven 30-day readmissions/reoperations occurred (five early in the series) in comparison to three for LAP-RBS. Hospital LOS was significantly ($p=0.0008$) less for the totally robotic than LAP approach (1.31±0.04 vs. 1.52±0.06 days, respectively). Perioperative outcomes of TR versus LAP conversion of LSG to RYGB were similar with regard to operative times (144.4±4.3 vs. 153.0±6.8 min, respectively) and patient characteristics (BMI, age, co-morbidities). However, with the TR vs. LAP approach, there was a trend ($p=0.077$) toward shorter LOS (1.26±0.07 TR vs. 1.55±0.09 days LAP, respectively). LSG to RYGB readmission/reoperation rates averaged 11.9% and 8.7% for the TR and LAP approaches, respectively, $\text{Chi Sq} > 0.05$.

Conclusion

TR-RBS is safe with comparable operative times to LAP-RBS and shorter LOS.

P-75

COMPARISON BETWEEN GUT MICROBIOTA RICHNESS AND DIVERSITY IN DIFFERENT CONSISTENCIES OF STOOL OF BRAZILIAN WOMEN WITH OBESITY

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Background

Gut microbiota (GM) consists of a complex ecosystem, characterized by its diversity and functional capacity. Studies indicate that the greater the diversity, the better the stability and resilience to disturbances, making bacterial diversity an important marker of gut health. Furthermore, stool consistency seems to be strongly associated with GM diversity. Once altered, GM acts as one of the etiological factors of obesity, however few studies have verified the relationship between stool consistency and the diversity of the fecal microbiota in individuals with obesity.

Objectives

This study aimed to evaluate the association between stool consistency and gut microbiota richness and diversity in women with obesity.

Methods

Cross-sectional, observational study performed with 42 adult women with obesity. GM analysis was performed using a stool sample through the 16S ribosomal sequencing method. Information on stool consistency was obtained by applying the Bristol stool form scale, an ordinal scale of stool types ranging from the hardest (type 1) to the softest (type 7). Thus, the population was divided into groups according to the reported stool consistency (hard: types 1 and 2; normal: types 3-5; loose stools: types 6 and 7). For statistical analysis, SPSS v.22 software was used, considering $p\text{-value} < 0.05$.

Results

Among the 42 participants, 7, 25 and 10 reported hard, normal and loose stools, respectively. No statistical difference was observed between the groups with regard to the richness and diversity of phyla and genera that compose the GM.

Conclusion

Our results suggest the absence of significant difference between richness and diversity of phyla and genera when comparing stool consistencies in this population. It is worth mentioning that this is one of the few studies contemplating this objective in a group with obesity. Therefore, it is considered a relevant research.

Keywords: Obesity, gut microbiota.

P-76

COMPARISON BETWEEN LIPOSOMAL IRON AND NORMAL IRON SUPPLEMENTS IN POST-BARIATRIC PATIENTS

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Introduction

Anemia post-bariatric surgery is of concern and generally thought to be caused by iron deficiency. Liposomal iron tablets was found to be more effective in general surgical patients and obstetric patients in comparison to other iron supplements

Aim of the study

To study and compare the effect of liposomal iron to other iron supplements in post bariatric patients.

Methods

We prospectively followed patient who underwent bariatric surgery in our unit and who completed 1year after surgery and who was started on iron (liposomal or other types of iron). Hemoglobin and iron studies were done for all patients before surgery, after 3, 6 and 12 months.

Results

Data showed better results with liposomal iron in comparison to other types. Patients had no change in the mean Hgb and iron level after liposomal iron intake.

Conclusion

Liposomal iron seems to be a better option than regular iron tablets in post-bariatric patients to maintain adequate levels of serum iron hemoglobin. Further studies with longer follow up is needed to confirm these results.

P-77

COMPARISON OF 36 PATIENTS TREATED BY ROUX EN Y GASTRIC BYPASS WITH AND WITHOUT FUNDECTOMY

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Background

Surgeons more experienced in sleeve gastrectomies may have difficulty in performing roux-en-y gastric bypass initially. We modified the classic roux-en-y gastric bypass technique by transecting the stomach at the level of the proposed lower end of the gastric pouch and detaching the fundus from the omentum and short gastric vessels, similar to the steps of creating the sleeve of a sleeve gastrectomy. The pouch was then created over a gastric tube, thus resecting the fundus (fundectomy). The resection of the fundus would be expected to lower ghrelin levels contributing to better weight loss.

Objective

To evaluate whether fundectomy during roux-en-y gastric bypass would be a beneficial modification producing better weight loss

Method

30 severely obese patients were treated with roux en y gastric bypass with fundectomy between October 2022 and February 2023, of these, 12 patients were excluded because of data problems. 18 patients were compared to a similar number of patients treated with classic roux en y gastric bypass (without fundectomy) done prior to October 2022. Both groups were compared in the time needed to create a gastric pouch from start of the firing of the first stapler until the end of the firing of the last stapler. Both groups were also compared in BMI reduction before surgery and at 1 month follow up

Results

The average difference of time needed to create a pouch with fundectomy was 6.8 minutes longer than without fundectomy (95%CI -12.1 - -1.5 p< .001). BMI reduction in the fundectomy group was significantly higher than in the non fundectomy group with a difference of 1.37kg/m² (95%CI 0.24 - 2.5 p<0.001).

Conclusion

While roux en y gastric bypass with fundectomy is technically more familiar for novice surgeons performing sleeve gastrectomies regularly, it also yields better weight loss at the cost of a slightly longer operating time. Further randomized studies to evaluate Ghrelin levels following fundectomy are planned.

P-78

COMPARISON OF EXCESS WEIGHT LOSS OUTCOMES BETWEEN LAPAROSCOPIC SLEEVE GASTRECTOMY AND LAPAROSCOPIC MINI GASTRIC BYPASS IN PATIENTS WITH SEVERE OBESITY

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Background

Obesity is a complex, multifactorial, and largely preventable disease; The current most widely used criteria for classifying obesity is the body mass index (BMI; body weight in kilograms, divided by height in meters squared) which ranges from underweight or wasting (<18.5 kg/m²) to severe obesity (≥40 kg/m²); bariatric metabolic surgeries has been shown to be effective for weight loss. The most performed bariatric surgery was Roux en y; nowadays; Laparoscopic sleeve gastrectomy (LSG). laparoscopic mini gastric bypass (LMGB) introduced by Rutledge; follow LSG in popularity.

Objectives

Is to compare excess body weight loss (EWL) outcomes between LSG and LMGB in one year.

Method

A prospective study; enrolling all patients underwent LSG and LMGB in AL-Imamain AL-Kadhumain Teaching hospital done by one surgical team during the period between 1st January 2019 to 31st December 2019; patients initial BMI ranges from 45 kg/m² to 55 kg/m²; Patients weight records were followed up one year after their surgeries in 3;6;9;12 months intervals.

Results

97 patients operated for LSG and LMGB; 50 of them met the inclusion criteria distributed as 25 patients operated for LSG and 25 patients operated for LMGB; both surgeries were effective in terms of Excess body weight loss (EWL); 80% were females and 20% were males with mean age of 37.66±9.99 years ;mean Excess body weight loss for LSG and LMGB (calculated as Ideal BMI=24.9 kg/m²) at 3 months post-surgery follow up was 33.80±9.55% (P value 0.0001) with mean body weight 113.70±14.52 kg ; 50.31±9.42 % (P value 0.0001) at 6 months with mean body weight 102.36±12.83kg; 62.06±9.75% (P value 0.0001) at 9 months with mean body weight 94.18±10.84 kg and 69.48±9.63 % (P value 0.0001) at 12 months follow up with mean body weight 88.90±9.61 kg. Our results also shows that there was no significant difference for EWL outcomes between LSG and LMGB in one year follow up. With EWL at 12 months was 68.7% for LSG and 70.3% for LMGB.

Conclusion

Both LSG and LMGB are effective for EWL with insignificant difference between their EWL outcome in one year post surgery follow up.

P-79

COMPARISON OF REMISSION RATE OF TYPE 2 DIABETES MELLITUS IN THE SHORT TO INTERMEDIATE TERM BETWEEN BARIATRIC PROCEDURES: SLEEVE GASTRECTOMY, ROUX-EN-Y GASTRIC BYPASS AND ONE ANASTOMOSIS GASTRIC BYPASS

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Background

Bariatric surgery is now widely reported to ameliorate or resolve type 2 diabetes mellitus (T2DM). There is heterogeneity in the reported outcome comparing the remission rate of T2DM after bariatric procedures in the short, intermediate and long term.

Objective

This study aimed to identify the T2DM remission rate and to determine the effects of preoperative factors characteristics of remission of T2DM after SG, RYGB and OAGB in short to intermediate term.

Methods

A retrospective review was done from a prospectively maintained database of patients with various bariatric operations at our Centre. Patients who had undergone an SG, RYGB and OAGB and had T2DM were identified. Data on age, sex, body mass index (BMI), C-peptide level, initial weight and weight at 1, 3 and 5-year intervals and co-morbidities were collected. Specifically, data on haemoglobin A1c (A1c) levels for each patient before the operation and at 1, 3, and 5-year intervals were collected. Only patients with complete five-year follow-up data were included in the analysis. The remission of T2DM based on the 2009 American Diabetes Association (ADA) criteria was determined and analysed.

Results

A total of 6713 patient records were reviewed; 1711 patients (25.5%) undergoing SG, 2159 (32.1%) RYGB and 2846 (42.4%) OAGB with complete five years follow-up were identified. 69.1%, 72.3%, 73.5% of SG 79.7%, 81.3% 82.6% of RYGB and 80.2%, 83.3%, 83.9% of OAGB participants were in T2DM remission after 1-3 and 5 years, respectively. 1- 3 and 5-year remission were associated with preoperative age, BMI, duration of T2DM, HbA1c and FBS, oral/insulin treatment and per cent total weight loss (%TWL).

Conclusion

This study mainly focuses on the effects of SG, RYGB and OAGB operations on T2DM remission; we found that OAGB had a significantly higher remission rate than SG and RYGB at the short to intermediate intervals. Various preoperative factors determine the remission rates after these operations at different intervals.

Keywords: Type 2 diabetes; Hemoglobin A1c; Sleeve gastrectomy; Roux-en-Y gastric bypass; One Anastomosis Gastric Bypass; T2DM Remission.

P-80

COMPARISON OF THE VALIDITY OF TRANSFERRIN SATURATION, SERUM FERRITIN AND C-REACTIVE PROTEIN VERSUS SERUM FERRITIN AS A DIAGNOSTIC METHOD OF IRON DEFICIENCY IN PATIENTS UNDERGOING BARIATRIC AND METABOL

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Background

Iron deficiency is the most prevalent nutritional deficiency and one of the main causes of anemia worldwide, being related to obesity and other chronic inflammatory diseases, affecting intestinal iron absorption, its bioavailability and sequestration, with depletion of reserves. Currently the method used to diagnose iron deficiency in patients living with and without obesity is the same.

Objective

Demonstrate the usefulness of a new diagnostic method for iron deficiency in patients with chronic inflammatory state such as obesity using serum ferritin, transferrin saturation and C-reactive protein; and compare these results with the traditional method which uses only ferritin value.

Methods

A total of 96 individuals were included in our analysis, 78.1% (n=75) women and 21.9% (n=21) men. We applied 2 methods to diagnose iron deficiency to the whole sample: method 1 (serum ferritin < 30 ng / mL) and method 2 as a composite variable divided into submethod 2A (serum ferritin < 30 ng / mL), submethod 2B (serum ferritin ≥ 30 and < 100 ng / mL and PCR ≥ 5 mg / L), submethod 2C (serum ferritin ≥ 100 ng/mL and ≤ 300 ng/mL, CRP ≥ 5 mg/L and transferrin saturation < 20%) and 2D submethod (transferrin saturation < 20%); to identify the most determining variable for the diagnosis of iron deficiency.

Results

Correlation between method 1 and total method 2 was statistically significant ($p < 0.0001$), 38 patients (n = 96) who had iron deficiency using method 1 were positive also in method 2. Indicating that there's a significant level of underdiagnosis (39.6%) between these two methods, which implies that many of these patients who undergo bariatric and metabolic surgery, have an increased risk of suffering iron deficiency with or without anemia in their postoperative stage. The sensitivity and specificity values after this correlation were 100% and 43.4% (positive predictive value of 0.43 [0.32 – 0.55] and negative of 1 [0.88 – 1]) respectively.

Conclusion

The use of transferrin saturation, serum ferritin and C-reactive protein has greater validity than serum ferritin for the diagnosis of iron deficiency in patients with obesity.

P-81

COMPLICATIONS OF BARIATRIC-METABOLIC SURGERIES IN GIBRALTAR

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Background

Bariatric-metabolic surgery has been advancing rapidly since the introduction of laparoscopic surgery. Although complication rates have decreased dramatically with the minimally invasive approach, they still are a significant source of concern for patients and surgeons.

Objectives

This case series evaluates the complications of all bariatric surgeries performed at the St Bernard's Hospital. Gibraltar Health Authority (GHA).

Methods

Baseline data including gender, age, pre-op weight, BMI, metabolic profile, co-morbidities, procedures performed, length of hospital stay (LOS) and the outcomes were recorded; complications were evaluated.

Results

105 bariatric procedures were performed in the GHA between September 2017 to March 2022. Female to male ratio 81:24, average age 45.9 years. Out of the 105 cases, complications included 2 anastomotic leaks, 3 staple line bleedings and one rare case of an internal hernia with an incidental finding of a retained foreign body. Other medical complications included hospital acquired pneumonia and flare of ulcerative colitis, reflux and vomiting, melena and hypoglycaemia. Out of 105 cases, total of 6 patients needed a re-operation. There were no mortalities.

Conclusion

Bariatric-metabolic surgery is mostly safe and effective. We had no mortalities and low post op morbidities. Our data is comparable to the benchmark on bariatric-metabolic surgeries and it reflects the UK National Bariatric Registry.

P-82

CONDUCTING PRE-SURGICAL BARIATRIC PSYCHOSOCIAL EVALUATIONS IN A PANDEMIC: TRENDS FROM IN-PERSON AND TELEHEALTH ASSESSMENTS

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Background/Introduction

In response to the COVID-19 pandemic, health services began or increased provision of care via telehealth, including pre-surgical bariatric consultations. Previous literature indicates that utilizing telehealth for pre-operative bariatric appointments is associated with lower attrition rate and high satisfaction within patients, and may reduce costs for both patients and hospitals.

Objectives

The purpose of this study was to scrutinize differences in patient report of psychological symptoms based on when the pre-surgical psychosocial evaluation was conducted (pandemic vs. pre-pandemic), which also coincided with assessment modality (telehealth vs. in-person).

Methods

Our sample consisted of 460 adults (70.7% female) who received a pre-surgical bariatric psychosocial evaluation at our institution (Feb 2014-Jan 2021). 327 received pre-pandemic evaluations (in-person) and 133 received evaluations during the pandemic (telehealth). The protocol included the Beck Depression Inventory-Second Edition (BDI-II), Multidimensional Health Locus of Control (MHLC), and a questionnaire about pre-surgical behavior changes. A MANOVA and follow up ANOVAs were utilized to compare the summary scores of these measures based on evaluation type.

Results

The sample was 54.6% White, 21.9% Hispanic, 20.9% Black, and 2.6% Asian. There was no significant difference in race or gender by evaluation type. Individuals evaluated pre-pandemic were slightly older. The MANOVA result was significant and follow-up ANOVAs revealed that individuals reported more depressive symptoms [$F(1,309)=13.64$, $p<.001$] and fewer pre-surgical changes during the pandemic [$F(1,309)=6.71$, $p=.01$]. BDI-II score was weakly negatively correlated with the number of pre-surgical changes ($r=-0.22$, $p<.001$).

Conclusion

Results indicate that the pandemic has likely increased depressive symptoms in surgery candidates, as well as decreased the likelihood of making pre-surgical behavior changes. It is also possible that the telehealth format impacted patient reporting of symptoms, and this should be an area of future study. At present, it appears that telehealth is a suitable format for completing bariatric pre-surgical psychosocial evaluations.

P-83

CONSEQUENT INTRAGASTRIC BALLOON RUPTURES IN AN OBESE PATIENT: FIRST CASE IN THE LITERATURE

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Background

Obesity is a significant public health concern due to its association with numerous chronic diseases. Invasive and non-invasive methods for weight loss exist, with intra-gastric balloons (IGBs) being a popular non-invasive option. However, rare, and serious complications have been reported recently.

Objectives

To present the first confirmed case in the literature of an IGB rupture and to discuss the potential challenges and complications associated with IGB treatment.

Methods

We report the case of a 29-year-old female patient who underwent placement of a Spatz 3 IGB for obesity. The patient lost 12 kg during the first three months with no complications. However, six months after placement, the patient presented to the emergency department with severe epigastric pain and blue urine. Exploration via endoscopy revealed a deflated and torn IGB in the stomach, which was retrieved. The patient lost 11 kg and requested a new IGB, which was inserted two months later. However, two months after the second IGB insertion, the patient presented again with the same symptoms. Endoscopy revealed a partial tear in the catheter of the IGB, which was again retrieved.

Results

IGB rupture can manifest with abdominal pain, discomfort, and blue urine. Endoscopic retrieval is the preferred management for ruptured and displaced IGBs. Complications with IGBs can be prevented with adequate attention, and regular follow-ups, nutritional expertise, and counseling on advantages and disadvantages, including unusual complications, may be beneficial during treatment. Encouraging patients to strictly follow recommendations by healthcare professionals is crucial for preventing undesirable incidents. The cause of the ruptures in our case was thought to be due to the patient's unhealthy dietary habits and ignoring proton pump inhibitor treatment.

Conclusion

In conclusion, IGB treatment is safe and effective in selected cases, and awareness of potential complications is essential. Our case provides an insight into the potential challenges that surgeons can face and highlights the need for recognizing IGB rupture as a complication of IGB insertion.

P-84

CONTINUOUS MONITORING AFTER LAPAROSCOPIC GASTRIC BYPASS: A PATHWAY TO AMBULATORY?

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Background

Laparoscopic gastric bypass is a common bariatric surgery procedure typically performed in a hospital setting with an overnight stay. Same-day surgery, where patients are discharged on the same day as their surgery, is becoming more popular in healthcare. However, there is limited research on the feasibility and safety of same-day surgery in laparoscopic gastric bypass surgery. Continuous monitoring during the perioperative period is a growing technology that can help ensure patient safety and optimize surgical outcomes, including in metabolic and bariatric surgery.

Objectives

This study aims to compare standard monitoring with continuous monitoring using the ISANSYS Patient Status Engine™ in the postoperative setting of laparoscopic gastric bypass surgery. The objective is to prove the reliability and identify the possible added value of continuous monitoring versus conventional monitoring by the nursing team in the outcome of patients undergoing laparoscopic gastric bypass.

Methods

Ten patients undergoing laparoscopic gastric bypass at our institution are being consecutively enrolled in the continuously monitoring during their hospital stay with the ISANSYS™ device with Lifetouch sensor, lifetemp sensor and Nonin Pulse Oxymeter sensor. The continuous monitoring data will be compared with the records of the nursing team recorded in our conventional digital process, as well as with any disruptive symptomatology described by the patient.

Results

Data collection is ongoing, and preliminary results show a high degree of data consistency between both monitoring methods. However, the temperature sensor of the device consistently shows lower temperatures than the conventional ear thermometer.

Conclusion

Continuous monitoring using the ISANSYS device can provide reliable data and potentially decrease hospital stay, while improving patient satisfaction, after laparoscopic gastric bypass surgery. This study will become an important auxiliary tool to increase confidence in shortening hospital stays for overnight surgery and the possibility of same-day surgery for well-selected patients in the future.

P-85

CONVERSION FROM SLEEVE GASTRECTOMY TO ROUX-EN-Y GASTRIC BYPASS: MIDTERM OUTCOMES IN 50 CONSECUTIVE PATIENTS

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Background

Sleeve gastrectomy is the most commonly performed primary bariatric procedure worldwide, with approximately 10% of patients globally and 15% in Europe undergoing conversion to another bariatric procedure, with Roux-en-Y gastric bypass being the most common. A recently published meta-analysis compared the outcomes of these conversions in 17 cohorts (with 10-89 patients each) and up to 3 years of follow-up.

Methods

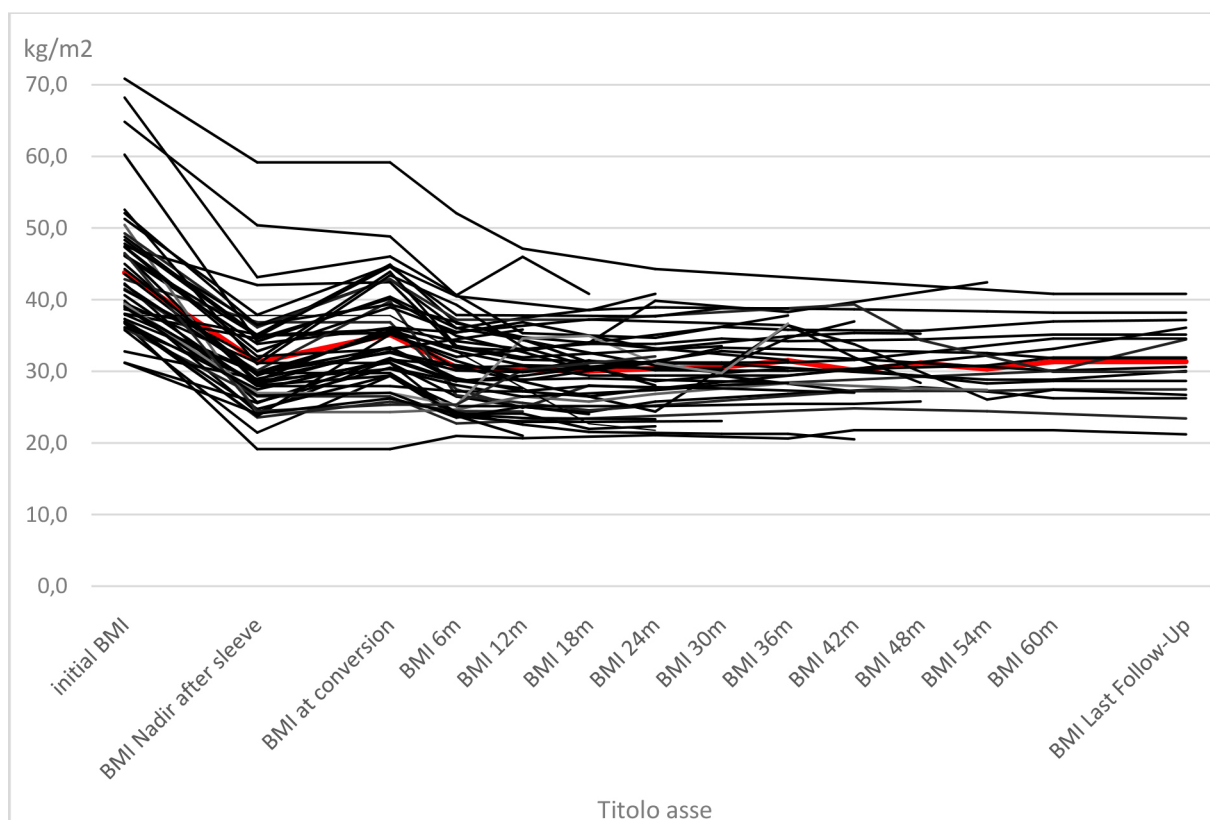
We present a single-center cohort of 50 consecutive patients who underwent conversion from sleeve gastrectomy to proximal Roux-en-Y gastric bypass between 2013 and 2021, with an mean follow-up of 44.8 months.

Results

Of the 50 patients, 30 underwent conversion due to gastroesophageal reflux disease (GERD) or persistent vomiting, 19 due to secondary weight regain, and 10 due to both issues. One patient underwent early conversion due to a micro-leak of the sleeve gastrectomy. Of the 50 patients, 38 were female and 12 were male, with an average initial BMI of 43.8kg/m² (range 31.2-70.9) at the time of sleeve gastrectomy. The average age at the time of sleeve gastrectomy was 39 years, and the average time between the two procedures was 44 months (range 0-102). Following sleeve gastrectomy, the percentage of excess body mass index loss (%EBMIL) and total body mass index loss (%TBMIL) was 69.1% and 28.0%, respectively. However, weight regain resulted in a lower %EBMIL and %TBMIL of 45.9% and 19.1%, respectively, at the time of conversion to Roux-en-Y gastric bypass (RYGB). At the last follow-up, the %EBMIL and %TBMIL increased again to 74.9% and 31.0%, respectively, which is comparable to the results achieved with primary RYGB. After conversion to RYGB, 60% (21/35) of patients who had GERD after sleeve gastrectomy experienced no reflux symptoms without further treatment, 34% (12/35) had their symptoms controlled with Proton Pump inhibitors, and 2 patients had persistent symptoms despite therapy.

Conclusion

Conversion from sleeve gastrectomy to Roux-en-Y gastric bypass is effective in managing weight regain and GERD symptoms.



P-86

CONVERSION OF SLEEVE GASTRECTOMY TO BIPARTITION PROCEDURES: A RETROSPECTIVE CASE CONTROLLED STUDY

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Background

Although Sleeve Gastrectomy (SG) is nowadays the most performed bariatric procedure worldwide, 20 to 50% of the patients will show moderate outcomes regarding % of Excess Weight Loss (%EWL) in 5 years. Conversion to bypass procedures is then considered, with variable results in the literature. To the best of our knowledge, no studies have examined the efficacy of different types of Bipartitions Procedures (BP) after SG.

Objectives

To compare the outcomes of three types of BP after SG: Single Anastomosis Sleeve-Ileal Bipartition (SASI), Single Anastomosis Sleeve-Ileal Bipartition with Braun's Jejunojunostomy (SASI-BJJ) and Santoro Bipartition (SB).

Methods

This is a retrospective, single-center case control study of patients undergoing SASI, SASI-BJJ and SB for further weight loss in our center, from 2017 to 2021, with a minimum follow-up (FU) of 2 years. Inclusion criteria were a history of SG to BP conversion, Body Mass Index (BMI) > 30 kg/m² at the time of the BP, weight regain or inadequate weight loss after SG and persistence of comorbidities. Data on weight loss, resolution of comorbidities (type 2 diabetes mellitus-T2DM, hypertension, sleep-apnea, and reflux), early (< 30 days) and late complications for each patient were collected. Each subject undergoing SASI was matched one-to-one with a patient in whom a SASI-BJJ was performed and another one converted to SB with correspondent initial BMI, age and sex. Outcomes were analyzed at 6, 12 and 24 months of follow-up.

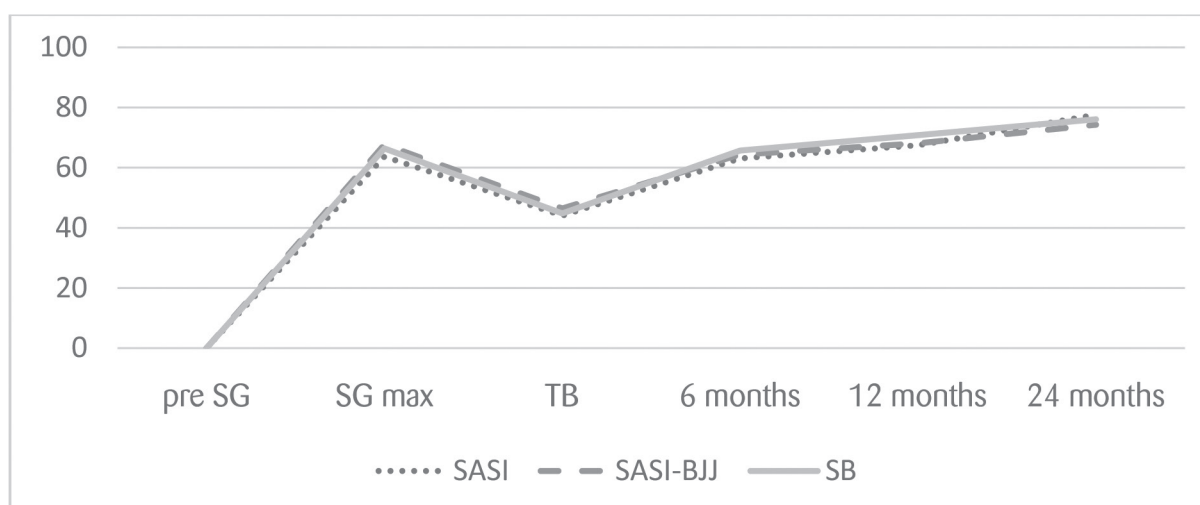
Results

An overall of 90 patients were included in the study, 30 in each group. %EWL was comparable with all 3 types of BP and is shown in table one. Resolution of T2DM, hypertension and sleep-apnea was also satisfactory in each group. Persistence of reflux was higher on patients undergoing SASI. Rate of early complications was similar in each group. On the long term, SASI patients experienced more problems than patients undergoing SASI-BJJ and SB procedures (20.4%, 10.5%, 4%).

Conclusion

%EWL outcomes of different BP after SG show good results at 1- and 2-years FU. Due to higher complication rate of SASI, SASI-BJJ and SB seem to be safer on the long term.

Table 1. %EWL over time.



P-87

CONVERSION TO SADI-S VERSUS RYGB AND BPD/DS DUE TO INSUFFICIENT WEIGHT LOSS

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Background

Single Anastomosis Duodenoileal Bypass with Sleeve Gastrectomy (SADI-S) is currently used as an alternative for insufficient weight loss (IWL) after Sleeve Gastrectomy (SG), representing 4% of the overall sleeve gastrectomy conversions in the United States between the 2020-2021 period.

Objectives

We aim to compare the 30-day outcomes between conversion to SADI-S versus conversion to Roux-en-Y Gastric Bypass (RYGB) and to Biliopancreatic Diversion with Duodenal Switch (BPD/DS) for IWL after SG.

Methods

Patients who underwent conversion from SG to SADI-S (CSADI-S) and those who underwent conversion from SG to RYGB (CRYGB) and to BPD/DS (CBPD/DS) were identified using the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP) database of 2020 and 2021. Two analyses were performed: first, a 1:5 propensity-matched analysis (PMA) for 22 variables to compare the outcomes of CSADI-S with CRYGB; then, a second 1:1 PMA was done to compare with CBPD/DS.

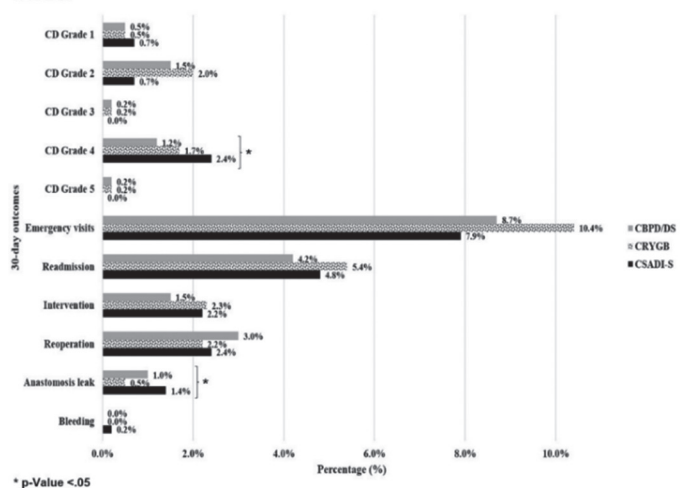
Results

There were 416 conversions from SG to SADI-S reported in the 2020-2021 period. After PMA (1:5 CRYGB: 2080 patients; 1:1 CBPD/DS: 416 patients), CSADI-S was associated with longer operative times than CRYGB (154.39 ± 72.31 min vs. 144.99 ± 69.49 min, $p=0.013$) but similar to CBPD/DS. CSADI-S had more Clavien Dindo (CD) grade 4 complications than CRYGB and CBPD/DS (2.4% versus 1.2% and 2.4% versus 1.7%, respectively). Similarly, the CSADI-S group had higher rates of anastomotic leak than CRYGB (1.5% versus 0.5%, $p=0.025$) but similar to CBPD/DS. Other outcomes, such as emergency visits, readmission, intervention, reoperation, and postoperative bleeding, were not statistically significant (Figure 1).

Conclusion

Conversion from SG to SADI-S, as an alternative for insufficient weight loss, showed a higher incidence of Clavien Dindo grade 4 complications than RYGB and BPD/DS conversions and an increased rate of anastomosis leak when compared to RYGB only. Prospective studies analyzing the long-term complications and efficacy following SADI-S conversion are needed.

Figure 1. Comparison perioperative complications in conversion from Sleeve Gastrectomy to CSADI-S, CRYGB, and CBPD/DS



P-88

CORRELATION OF GASTRIC REMNANT VOLUME WITH RADIOSCOPIC PARAMETERS AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY WITH WEIGHT LOSS – A CROSS-SECTIONAL STUDY

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Background

Bariatric and metabolic surgery is the optimal treatment that achieves stable weight loss in patients with clinically severe obesity. It has been suggested that the immediate postoperative Gastric Remnant Volume (GRV) may affect the long-term results of laparoscopic sleeve gastrectomy (LSG).

Objectives

To assess the value of the radiographically-calculated gastric remnant volume (GRV) for predicting weight loss (WL) following (LSG).

Methods

This is an initial report of the final study. The study will last 2 years, 1 for case collection and 1 for postoperative follow-up. Participants meet internationally accepted criteria for eligibility for metabolic surgery: age ≥ 18 years old, BMI ≥ 40 kg/m², or BMI ≥ 35 kg/m² with the presence of associated health problems. The exclusion criteria are severe heart failure, severe pulmonary disease, cancer, active inflammatory disease or septic disease, or inability/refusal of patient to cooperate. We performed Upper GI transit as part of our perioperative protocol on postoperative day 3 or 4 with a water-soluble contrast medium and the passage through the gastric remnant is examined with fluoroscopy and rapid sequence.

Results

Over this preliminary study period, 28 patients underwent LSG and a minimal 6-month follow-up timeframe has elapsed. There were 21 females (75%). The mean preoperative BMI was 49.3 Kg/m² ± 5.9 (range: 39.1–65.3). The mean GRV immediately postoperatively was 77.15 mL ± 37.23 (41.4–184). At 6-month follow-up, the mean values of weight loss indices (WLI) as per the Standardized Metabolic Surgery Outcome Report were: BMI 34.8 Kg/m² ± 5.8 (27–43.7), %TWL 29.2 ± 4.5 (20.8–36.5), %EWL 62.1 ± 12.4 (38.1–80.9), %EBMIL 62.2 ± 14.3 (38.0–81.0), and %AWL 40.1 ± 6.1 (27.3–46.7). The respective correlation indices between GRV and WLI were as follows: $r_{\Delta\text{BMI}}$ -0.051, r_{TWL} 0.0107, r_{EWL} 0.053, r_{EBMIL} 0.21, r_{AWL} -0.096.

Conclusion

In our preliminary cohort, postoperative GRV after LSG had a weak positive correlation with EBMIL, among the examined weight loss indices. The small sample size does not permit for generalizations. The study is still ongoing and further results will allow more solid conclusions.

P-89

COST BURDEN OF MANAGING THE COMPLICATIONS OF PRIVATELY INSERTED GASTRIC BANDS – A 10 YEAR EXPERIENCE FROM A HIGH VOLUME BARIATRIC UNIT

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Introduction and Aim

Over the last 10 years this high-volume bariatric centre has been inserting fewer and fewer gastric bands for weight loss, and yet there seems to be more and more patients with complications of the device. This study aims to review the cost implication to the trust of managing gastric band complications, and looks at both NHS and privately inserted bands over the last 10 years.

Method

Any gastric band complication coded for over the last 10 years has been reviewed. Inclusion criteria was any intervention performed on a gastric (eg band deflation, removal, port manipulation). Exclusion criteria was any newly inserted gastric band and therefore the preoperative work-up for these. All interactions related to the intervention were reviewed, such as clinic appointments, endoscopic or radiological investigations, or band deflations. The cost of these were then added up to give a final estimate of the cost associated with the complication. The coding data was collected from the National Tariff Payment system for 2022/2023, and cross referenced with local data.

Results

105 events were identified as complications of gastric bands. Of these, 44 relate to privately inserted bands, 52 to NHS inserted bands, and for 9 bands it was not possible to elicit whether they were private or NHS. 25/44 private bands were removed. 45/52 NHS bands were removed. The cost of managing NHS band complications in this time frame was £152,032 (£143,236 relating to removals). The cost of managing complications of privately inserted bands was £91,130 (£78,526 relating to removals)

Conclusion

Privately inserted gastric bands do have a significant cost implication to the NHS, but significantly less than their NHS inserted counterparts, even when considering the proportion of NHS to private bands. However, some of these privately inserted bands were done so outside of NICE criteria, and so arguably were not necessary.

P-90

COVID19 PANDEMIC AND PHYSICAL ACTIVITY LEVEL IN PATIENTS OF A BARIATRIC SURGERY AND PRIMARY CARE PROGRAM

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Background

Physical activity (PA) is a protective and preventive factor for maintaining health. Individuals with severe obesity have low physical condition and sedentary lifestyle habits. The COVID19 pandemic has imposed numerous restrictions, highlighting sedentary behavior that has become even more routinary.

Objective

To assess whether individuals in a bariatric surgery and primary care program were able to achieve the WHO recommendations for low to moderate PA during the COVID19 pandemic.

Methods

Study carried out between November/2020 and April/2022, in adult individuals, assisted in the bariatric surgery and primary care program of a hospital and basic health unit of the public network in the southern region of Brazil. They were contacted via telephone survey and through a structured questionnaire, where they were asked about the practice of PA. The questionnaire consisted of sociodemographic and anthropometric questions and self-report on the number of days and duration of low and moderate intensity exercises that were practiced in the week prior to the application of the questionnaire. Low intensity activities were characterized by continuous 10-minute walks and moderate activities by cycling, dancing and activities performed indoors.

Results

We assessed 200 individuals, 134 before and after bariatric surgery and 66 treated in primary care. 84.5% of the participants were women, with a mean age of 52.6(+13.3) years and 70% had a BMI above 35 kg/m². Only 22% of patients performed 150 minutes of low-intensity activity and 22.5% of moderate PA. In the total sum of low and moderate PA, only 39.5% performed the recommended minimum of 150 minutes. 48.5% of the individuals analyzed had walked less than twice a week for 10 continuous minutes. 34.3% patients in the bariatric surgery program did not walk for 10 continuous minutes on any day of the week.

Conclusion

Sedentary behavior already identified in populations with high BMI worsened during the COVID 19 pandemic. Structured exercise programs are needed to minimize the effects of the pandemic and introduce new habits in the population of bariatric patients and those with high levels of obesity.

P-91

CURRENT OUTCOMES OF OAGB IN THE UNITED STATES: A COMPARATIVE ANALYSIS VERSUS RYGB AND SADI-S

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Background

One anastomosis Gastric Bypass (OAGB) is described as a potentially safe and effective bariatric-metabolic procedure that has been recently endorsed by the American Society of Metabolic and Bariatric Surgery (ASMBS).

Objectives

We aim to compare the 30-day outcomes between OAGB and other bypass procedures: Roux-en-Y Gastric Bypass (RYGB) and Single Anastomosis Duodenoileal Bypass with Sleeve Gastrectomy (SADI-S).

Methods

Patients who underwent primary OAGB, RYGB, and SADI-S were identified using the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP) database of 2020 and 2021. Two analyses were performed: first, a 1:1 propensity-matched analysis (PMA) of 22 variables to compare the outcomes of OAGB vs. RYGB; then, a second 1:1 PMA to compare OAGB vs. SADI-S.

Results

One thousand six hundred seven primary OAGBs were reported between 2020-2021. After PMA (1:1 RYGB: 1607 patients; 1:1 SADI-S: 661 patients), OAGB was associated with shorter operative times than RYGB (98.79 ± 52.76 min vs. 126.31 ± 60.86 min, $p < 0.001$) and SADI-S (100.94 ± 50.91 min vs. 140.27 ± 58.82 min, $p < 0.001$). Also, OAGB showed a lower incidence of postoperative complications Clavien Dindo (CD) Grade 1 and 2 compared to RYGB (0.2% vs. 1.1%, $p = 0.004$ and 0.7% vs. 1.9%, $p = 0.002$, respectively), as well as lower Grade 2 and 4 complications than SADI-S (0.9% vs. 3%, $p = 0.006$ and 1.1% vs. 2.7%, $p = 0.026$, respectively). Similarly, OAGB reported a lower incidence of readmissions and reoperations when compared to RYGB (2.4% vs. 5.2%, $p < 0.001$ and 1.2% vs. 2%, $p = 0.045$, respectively) and SADI-S (2% vs. 5.1%, $p = 0.002$ and 1.1% vs. 3.2%, $p = 0.007$, respectively) cohorts. Regarding bariatric-specific complications, OAGB had lower rates of anastomosis leak than SADI-S (0.2% vs. 1.2%, $p = 0.019$) and similar to RYGB.

Conclusion

The incidence of primary OAGB has increased since its approval by ASMBS, from 0.05% reported between 2015-2019 to 0.78% between 2020-2021. OAGB had better 30-day outcomes and shorter operative times than RYGB and SADI-S and should therefore be considered a viable alternative.

P-92

DATA-DRIVEN PATIENT CLUSTERS MAY HELP IDENTIFY PATIENTS AT RISK AND PREDICT METABOLIC SURGERY OUTCOMES ON DIABETES REMISSION AND NAFLD PROGRESSION

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Background

Precision medicine and customized medicine have gained enormous attention in recent years, especially in the treatment of type 2 diabetes (T2D). Different subgroups of diabetes have been identified by research employing data-driven cluster analysis, each with a unique diabetes progression and complication risk. We aimed to apply the proposed cluster analysis to a patient population post metabolic surgery and investigate the association with T2D remission and presence of NAFLD.

Objectives

Setting: University Hospital, Germany.

Methods

We retrospectively related the newly defined clusters with the response to metabolic surgery in 37 patients with T2D. Two clusters were formed by data-driven cluster analysis (k-means clustering) based on six variables (glutamate decarboxylase antibodies, age at diagnosis, BMI, HbA1c, and homoeostatic model assessment 2 estimates of β -cell function (HOMA2-B%) and insulin resistance (HOMA2-IR)). Additionally, liver biopsies were taken intraoperatively from all patients and analyzed histologically for the presence of simple steatosis (NAFL) or NASH. Clinical and biochemical parameters were collected over up to two years. The study outcomes were T2D remission and improvement of NAFLD.

Results

While cluster 1 was characterized by hyperinsulinemia cluster 2 showed lower insulin production and higher insulin resistance (IR) and HbA1c. Patients assigned to cluster 2 were at higher risk for presence of NAFLD (69.23% vs. 95.83%) and diabetic nephropathy (0.00% vs. 20.0%). At 1 year, T2D remission was reported in 92.31% in cluster 1 and 70.83% in cluster 2. Metabolic surgery markedly reduced IR and promoted remission of NAFLD indicated by significant reduction of a non-invasive NASH detection score and decrease in liver enzymes in both clusters. While insulin production decreased in cluster 1, it increased in cluster 2.

Conclusion

Our findings suggest that patients in cluster 2 already show a lack of beta-cell compensation being associated with a higher prevalence of NAFLD and diabetic nephropathy and therefore should be prioritized for earlier intervention. Data-driven classification might help to customize treatment plans and identify patients at higher risk of problems at time of T2D diagnosis. This study supports the recently published ASMBS/IFSO guidelines recommending surgery at earlier stages of disease and expanding indications for metabolic surgery.

P-93

DAY-CASE SLEEVE GASTRECTOMY: INITIAL EXPERIENCE OF 55 CONSECUTIVE PATIENTS

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Background

In recent years we have observed a progressive trend towards increasing complexity in ambulatory surgery. This is due to clinical and economic benefits and soundly supported by safety studies. However, day-case bariatric surgery remains controversial due to conflicting reports and absence of high-quality evidence. Laparoscopic sleeve gastrectomy has been increasingly performed as day-case surgery and proved safe in prospective studies. Nonetheless, it has yet to gain acceptance of the international bariatric surgical community. Since sleeve gastrectomy is currently the most frequently performed bariatric surgery worldwide, the authors describe their experience with a pilot study of day-case sleeve gastrectomy.

Methods

Obese patients that met simultaneous criteria for bariatric surgery (body mass index (BMI) >40Kg/m² or BMI>35Kg/m² with comorbidities) and outpatient surgery were considered eligible. Exclusion criteria were: previous abdominal surgery, anticoagulant or anti-platelet therapy and uncompensated T2DM or sleep apnea. Patients were enrolled between April 2021 and March 2023. All patients were instructed to use and record vital signs using a portable device after discharge. Patients were interviewed by phone on the 1st post-operative day (POD) and seen at outpatient clinic at POD 2 and 30. A satisfaction questionnaire was conducted by telephone.

Results

Fifty-five patients underwent day-case sleeve gastrectomy. Median age was 42 years old (range 19-66) and 93% were female. Mean BMI was 41.8 kg/m² (range 37.5-55) and 93% had obesity-related comorbidities. Mean operative time was 58 minutes (range 30-150). There were no intraoperative surgical/anesthetic complications. Six patients stayed overnight due to intolerance to liquids, pain or not feeling comfortable with the discharge and were discharged at the following morning and one patient was admitted due to a suspected angina, with a negative workup. No post-operative complications occurred and there were no 30-day readmissions. Global satisfaction was graded 4,9/5, all but one would choose day-case surgery again and recommend it to other bariatric patients.

Conclusion

This pilot study supports previous reports that day-case ambulatory sleeve gastrectomy is safe, possible and associated with excellent patient satisfaction.

P-94

DEMOGRAPHIC OVERVIEW OF PATIENTS WHO UNDERWENT GASTRIC SLEEVE AND REQUIRING REVISION SURGERY DUE TO WEIGHT REGAIN AND INSUFFICIENT WEIGHT LOSS

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Background

Sleeve gastrectomy (SG) has been the most popular procedure for weight loss in the worldwide, however revisional surgery increased accordingly after failed sleeve gastrectomy. very few studies have addressed the preoperative predictors of Weight Regain (WR) and Insufficient Weight Loss (IWL), after bariatric surgery.

Methods

Retrospective analytical study of database on 210 patients who underwent Sleeve Gastrectomy to OAGB at Bajaj Hospital & Medical Center, Tijuana, Mexico, between January 2020 and January 2023 were evaluated. A total of 84 patients were included. Demographic data, preoperative BMI, reason for revisional surgery and comorbidities were recorded. WR and IWL were evaluated as a BMI of > 35 kg/m², an increase in BMI of > 5 kg/m² above nadir, an increase in weight of > 10 kg above nadir, percentage of excess weight loss (%EWL) < 50% at 18 months.

Results

Among the main causes of revisional surgery after sleeve gastrectomy found female gender in 91.6% (n: 77), male: 9.3% (n: 7). Obesity Grade 1 with 3 patients, female 66.6%, male n: 1 (33.3%), BMI 33, 3.3 years between SG to OAGB, age of 48.6 years, WR in 66.6% with Hypertension and hypotiroidism in 33% who need surgery for WR in 66.6% and 33.3% in IWL. Obesity grade II with 25 patients (29.7%), BMI 38.4, WR 69.2% and IWL 30.0%. Hypertension n 53.8%, hypotiroidism in 30.7%, anxiety/depression 26.9%, dyslipidemia in 3.8%. Obesity Grade III with n:37 (44%), female (86.4%) male (13.5%) BMI 44.7, with WR of (59.4%) and IWL (45.9%), Anxiety and depression in 29.7%, hypertension in 16.2%, hypotiroidism 8.1%, Tipe 2 diabetes in 5.4% and Severe Obese in 18 patients (21.4%), all female, who need revisional surgery because WR n 77%, IWL 225, hypertension and anxiety in 16.6% and type II Diabetes, dyslipidemia and hypothyroidism in 5.5%.

Conclusions

The main indications for revisional surgery after sleeve gastrectomy were weight regain, insufficient weight loss and morbidity associated. Our data suggest the comorbidities mainly depression, multiple psychiatric conditions and high BMI are ed to a revisional surgery after sleeve gastrectomy in an estimated time of 5.2 years.

P-95

DETERMINANTS OF SATISFACTION AND SELF-PERCEIVED PROFICIENCY OF FELLOWSHIPS OF BARIATRIC AND METABOLIC SURGERY FELLOWSHIP PROGRAM

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Background

Obesity is a chronic disease; its prevalence has been increasing due to what is currently considered a global epidemic. The training programs for metabolic and bariatric surgery aim to prepare surgeons for a better approach and treatment for patients with obesity. IFSO Latinamerican Chapter created a training program for different countries surgeons to contribute with the treatment of this epidemic.

Objective

We aim to determine the overall satisfaction of the first year IFSO LAC fellowship and the expectations of the second-year group.

Methods

We conducted a cross-sectional survey including all bariatric and metabolic surgery fellows from International Federation for the Surgery of Obesity and Metabolic Disorders Latinoamerica (IFSOLAC). Training program was assessed in 5 different hospitals on operative volume, hands-on training academic sessions, research opportunities and rounds to determine satisfaction and self – perceived proficiency.

Results

34 fellows from 20 different countries were assessed. Overall satisfaction was 9,23 (Rated from 0-10), Mean age of fellows was 34.04 ± 3.2 . Median time of experience as general surgeons was 1 year. A positive association was found between operative volume and overall satisfaction $t:8.12$ ($p<0,01$). Research opportunity was found as the most important aspect to improve by fellows.

Conclusion

Bariatric and metabolic surgery fellows of IFSOLAC from 5 different hospitals had high satisfaction scores. Case volume and hands-on training seem to be a determinant factor. Research opportunity should be taken into account as a key component from fellows perspective.

P-96

DETERMINANTS OF SATISFACTION AND SELF-PERCEIVED PROFICIENCY OF TRAINEES OF BARIATRIC AND METABOLIC SURGERY FELLOWSHIP PROGRAM

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IFSO, IFSOLAC, Miami, United States ⁽¹⁾ - Hospital CIBA, Dept. Bariatric and Metabolic Surgery, Tijuana, Mexico ⁽²⁾

Background

Obesity is a chronic disease; its prevalence has been increasing due to what is currently considered a global epidemic. The training programs for metabolic and bariatric surgery aim to prepare surgeons for a better approach and treatment for patients with obesity. IFSO Latin-American Chapter created a training program for different countries surgeons to contribute with the treatment of this epidemic. In this work we aim to determine the overall satisfaction of the first year IFSO Lac fellowship and the expectations of the second-year group.

Methods

We conducted a cross-sectional survey including all bariatric and metabolic surgery fellows from International Federation for the Surgery of Obesity and Metabolic Disorders Latin-American (IFSOLac). Training program was assessed in 5 different hospital on operative volume, hands-on training academic sessions, research opportunities and rounds to determine satisfaction and self – perceived proficiency.

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Conclusion

Bariatric and metabolic surgery fellows of IFSOLac from 5 different hospitals had high satisfaction scores. Case volume and hands-on training seem to be a determinant factor. Research opportunity should be taken into account as a key component from fellows perspective.

P-97

DIFFERENT EFFECTS OF LAPAROSCOPIC SLEEVE GASTRECTOMY AND LAPROSCOPIC ROUX-EN-Y GASTRIC BYPASS ON SERUM VALUES OF ADIPOSE ASSOCIATED MOLECULES

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Background

Bariatric surgery is an appropriate, effective treatment for patients with severe obesity and related comorbidities who have been unable to gain adequate benefits from conservative measures such as diet and exercise. While initially thought to function by simply limiting energy intake, it is now clear that both the restrictive and malabsorptive components of bariatric operations induce weight loss by altering the hormonal milieu of the gut and visceral adipose tissue. To date, published reports showed conflicting results regarding the sustained alterations in leptin, chemerin, and ghrelin levels after metabolic surgery. In addition, little research compared the changes in those adipokines and hormones following LSG.

Objectives

The current study aimed to compare the alterations in serum values of adipose associated molecules specially leptin, chemerin, and ghrelin concentrations one year after RYGB and LSG.

Methods

The present research is a prospective, comparative study that followed 100 obese patients who underwent RYGB or LSG, in a period from September 2019 to August 2021. We assessed the serum values of adiposity-associated mediators, including adipokines (leptin and active chemerin) and gastrointestinal hormones (total ghrelin). The primary outcome in the present study was the alterations in leptin, chemerin, and ghrelin values at 12 months after RYGB and LSG.

Results

Both techniques were effective in reducing weight, BMI, hip and waist circumference, blood glucose parameters, blood pressure, and lipid profile parameters. The percentage of hypertension decreased notably to reach 14% in the LSG and 16% in the RYGB, with no significant difference between both groups ($p > 0.98$). The prevalence of postoperative dyslipidemia was comparable between the LSG and RYGB groups (14% versus 12%, respectively; $p = 0.99$).

Conclusion

RYGB and LSG lead to significant sustained reductions in the serum adipokine values (leptin and chemerin) and GI hormone (ghrelin). Such findings may reflect that the improvements in these hormones may result from the improvement in insulin sensitivity and body weight after metabolic surgery. Nevertheless, future research is still warranted to elaborate the mechanistic approaches of such notable changes in these molecules and how they affect the clinical outcomes.

P-98

DO ABNORMAL POST-OPERATIVE BLOODS INDICATE ADVERSE OUTCOME AFTER BARIATRIC AND METABOLIC SURGERY (BMS)?

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Background

Many centres recommend venous blood tests at 12-18 hours after Bariatric and Metabolic Surgery (BMS). At our centre, we undertake routine blood tests the morning after surgery. There is an on-going need to rationalise the routine use of investigations to support the financial and environmental sustainability of our healthcare systems.

Objective

The aim of this study was to identify if routine post-operative blood tests led to a change in clinical management, duration of inpatient stay and likelihood of re-admission.

Methods

We carried out a retrospective analysis of data for consecutive patients that underwent BMS at a single centre. We reviewed the results of three main post-operative blood tests on day 1. These included White Cell Count(WCC), C-Reactive Protein(CRP) and Haemoglobin(Hb).

Results

We identified 158 consecutive patients that underwent BMS at our centre. Majority of the patients underwent a laparoscopic sleeve gastrectomy (n=129). Gastric bypass was performed in 29 patients (15 underwent Roux-en-Y and 14 patients One anastomosis bypass). Within our cohort, median age was 44.5 years (SD 11.6) with a mean BMI of 46.5kg/m² (SD 7.2). An abnormal blood test (above set threshold) was found in 17 patients (10.7%). This led to a change in clinical management in 6 patients (3.7%). This involved return to theatre in 1 patient, additional imaging and/or medical treatment in 2 patients and additional day of inpatient stay in 3 patients. 11 of the patients with abnormal bloods (64%) did not have an altered post-operative course. In the abnormal blood test cohort (n=17), no patients were readmitted or had a complication in 30 days. As compared to this, the normal blood tests cohort (n=141) had 7 (2.8%) re-admissions: 6 for imaging and symptom relief and one for a return to theatre for anastomotic leak.

Conclusion

Routine post-operative blood tests aid in the clinical decision making in post-operative period but are often applied in conjunction with the clinical assessment and not in isolation. Our study did not show that post operative abnormal bloods were indicative for 30-day re-admission or complications after discharge. Larger studies with cost-benefit analyses are needed to be able to bring a change in this practice.

P-99

DOES INTRA-ABDOMINAL FAT DISTRIBUTION AFFECT GASTRO-ESOPHAGEAL REFLUX (GER) IN PATIENTS OF OBESITY?

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Background

Obesity is a risk factor of gastroesophageal reflux disease (GERD). Especially, higher intra-abdominal pressure and thoraco-abdominal pressure gradient (TAPG) are known as factors of developing for GERD in patients with obesity. However, whether abdominal fat distribution affect gastroesophageal reflux (GER) is still unknown.

Objectives

The aim of this study is to investigate association between visceral fat distribution and findings of multichannel impedance pH monitoring (MII-pH) and high-resolution manometry (HRM). We hypothesized that worsen acid reflux parameters were found in upper-visceral obesity than in lower-visceral obesity because large amount of fat volume around EGJ may affect anti-reflux mechanisms.

Methods

This study included 34 consecutive patients who underwent MII-pH and HRM before bariatric-metabolic surgery in our institution between August 2016 and June 2022. Unenhanced computed tomography (CT) images were used for analysis of visceral fat area (VFA). Axial images of the abdomen were exported to a workstation using the SYNAPSE VINCENT image analysis system (Fujifilm Medical, Tokyo, Japan). A single slice at the around esophago-gastric junction (EGJ) level (above VFA) and at the umbilical level (below VFA) were selected. Above-to-below fat ratio (ABR) was calculated by dividing above VFA by below VFA. We investigated correlation VFA and ABR using MII-pH and HRM findings. Statistical significance was set at $p < 0.05$.

Results

This study included 17 patients of female (50%). Thirty-two patients were Japanese, and the others were Latin American. The median age, height, weight, and BMI were 46 (25-62) years old, 163.2 (149-180) cm, 107.3 (75-153) kg, 39.5 (31-56) kg/m², respectively. Correlation between above VFA, below VFA, ABR, and DeMeester score were $r=0.373$, $r=0.0748$, $r=0.317$, respectively ($p=0.0296$, 0.674 , 0.0676). Correlation above and below VFA, ABR with TAPG were $r=-0.0193$, $r=0.101$, $r=-0.218$, respectively ($p=0.914$, 0.101 , 0.215).

Conclusion

Large amount of above VFA were correlated with GER significantly, whereas intra-abdominal fat distribution did not correlated with TAPG. The result may indicate that distribution of VFA may affect another anti-reflux mechanisms (i.e., flap valve).

P-100

DOES ONE ANASTOMOSIS GASTRIC BYPASS EXPOSE PATIENTS TO GASTROESOPHAGEAL REFLUX, GASTRITIS, AND MARGINAL ULCER: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Background

There is still some concern regarding gastroesophageal reflux (GERD) and its complications after one anastomosis gastric bypass (OAGB). The reported results are controversial. Also, the effect of OAGB as primary or revisional surgery and its long-term effect on GERD and its complications is unclear.

Objective

The current systematic review and meta-analysis aimed to investigate the incidence of new-onset GERD, GERD change, esophagitis, Barret's esophagus, and revision due to reflux, gastritis, and marginal ulcer after OAGB.

Methods

A systematic review and meta-analysis was conducted to identify the related studies. Also, subgroup analyses based on time of follow-up and type of OAGB were done.

Results

Eighty-seven studies with 27,880 patients were included. The meta-analysis showed a 6% rate of new-onset GERD after OAGB. In addition, GERD status before the surgery did not change significantly after OAGB. Furthermore, the rate of esophagitis and Barret's esophagus was 15% and 1%, respectively. Most patients with esophagitis were in grades A or B (13%). Two percent of patients underwent revisional surgery due to severe reflux after OAGB. Our analyses had heterogeneous results and the sample size was a cofounder for heterogeneity of new-onset reflux. Subgroup analysis showed studies with sample sizes > 1000 had a 3% rate of new-onset reflux versus 7% for studies with lower sample sizes. In the subgroup analysis, the rate of new-onset GERD after OAGB was significantly higher than gastric bypass (OR=2.64, 95%CI: 2.01-3.49, p-value<0.01). The difference was not significant compared to sleeve gastrectomy. Rates of diagnosed gastritis and marginal ulcer were 14-17% and 2-3%, respectively. The table shows the results of subgroup analyses.

Conclusions

The current study showed a relatively low rate of GERD and its complications after OAGB but it was significantly higher than gastric bypass. However, the results were heterogeneous and surgical volume and technique may be important factors influencing the rate of reflux and its complications after OAGB.

Table: The results of subgroup analysis for gastroesophageal reflux, gastritis, and marginal ulcer after one anastomosis gastric bypass

Complication	Type of surgery		Time of follow-up		Type of study	
	Primary	Revision	Short time (<5 years)	Long time (>5 years)	Observational	RCT
New-onset GERD	4%	10%	6%	6%	6%	8%
Change in GERD	1.21 OR (NS)	0.26 OR (significant)	0.51 OR (NS)	0.69 OR (NS)	0.48 OR (NS)	0.61 OR (NS)
Esophagitis	16%	19%	13%	19%	14%	16%
Barret's esophagus	1%	--	1%	1%	1%	1%
Revision due to GERD	1%	6%	2%	2%	2%	0%
Gastritis	17%	--	16%	14%	15%	15%
Marginal ulcer	3%	2%	3%	2%	3%	3%

GERD: Gastroesophageal Reflux, NS: not significant, RCT: randomized Controlled Trial

P-101

DOUBLE ORIGIN OF AN OCCLUSION AFTER GASTRIC BYPASS: INTESTINAL INTUSSUSCEPTION CONTAINED IN A PETERSEN HERNIA

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Background

This case combines two rare RYGB occlusion complications requiring surgical exploration. Internal herniation in Petersen's space is a rare complication with an incidence of 0-14%. The incidence of intestinal intussusception following RYGB is 1/2000.

Methods

A 36-year-old female patient is referred to the emergency department for progressive abdominal pain. The main history is a RYGB in 2018 complicated by an internal hernia with breach closure. The weight kinetics since the operation is a loss of 60kg for a current weight of 58.9kg (BMI: 23.0kg/m²). The transit is preserved without nausea or vomiting. Vitals were stable. The clinical examination revealed a soft and painless abdomen. There is a hyperleukocytosis at 15G/l. The CT scan showed a small intestine intussusception contained in an internal hernia in Petersen's space and a major dilatation of the jejunojejunal anastomosis.

Results

Laparoscopic exploration was performed to identify the dilated loop-foot in the pelvis. The alimentary limb was removed and an internal Petersen's hernia (Fig.2) was found to contain the small bowel intussusception (Fig.1). After reduction of the intussusception, the underlying small intestine was not pathological and resection did not appear to be justified. The hernia was reduced and the breach closed with non-resorbable sutures. The postoperative course was simple with a liquid and food intake on day 1 and discharge on day 2.

Conclusion

Closure of Petersen's space should be performed as soon as technically possible with non-resorbable sutures. The invagination requires a reduction and in case of signs of suffering a reconnection of the jejunojejunal anastomosis.



Figure 1. Abdominal CT scan injected at portal time showing a whirlpool sign (arrow) in cross-section suggestive of intussusception.

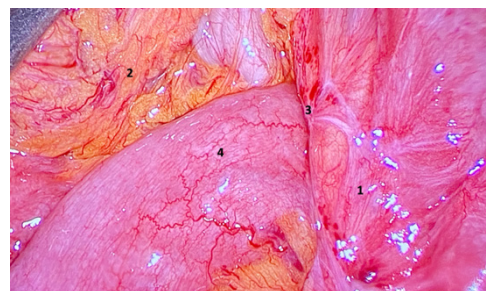


Figure 2. Image during exploratory laparoscopy showing an internal hernia in Petersen's space. 1. food loop mesentery. 2. Transverse mesocolon. 3. Petersen's space. 4 Small intestine draining into Petersen's space.

P-102

DUMPING SYNDROME AFTER BARIATRIC SURGERY DUE TO RELATIVE ADRENOCORTICAL INSUFFICIENCY

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Background

Postprandial hypoglycemia is a relatively common adverse effect after bariatric surgery. In most cases, hypoglycemia can be improved by changing dietary habits or by nutritional counseling. Occasionally, revision surgery is necessary for anastomotic dilatation or other surgically correctable reasons. However, sometimes the symptoms cannot be improved by nutritional or surgical means. Occasionally, hypoglycemia also occurs at nighttime, i.e. relatively independently of food intake. In these cases, a prolonged oral glucose tolerance test or a starvation test should be performed to rule out insulinoma, reactive hyperinsulinemia, or nesidioblastosis.

Objectives

The cause of refractory hypoglycemia should be investigated retrospectively.

Method

In a retrospective data analysis endocrine profiles of patients undergoing outpatient prolonged oral glucose tolerance testing or inpatient starvation testing in a reference center for bariatric surgery in northwestern Germany from 2019 to 2023 were investigated.

Results

In 55 patients, an endocrinological hypoglycemia diagnostic test with a provocation test has been performed. No patient showed evidence of insulinoma or nesidioblastosis. Further endocrine work-up showed in 8 patients that during the symptomatic hypoglycemia there was no physiological increase in cortisol secretion, thus proving a relative adrenal insufficiency in this stress situation. In four patients, the adrenal insufficiency is presumably explained by quite high-dose opioid therapy (n=3) or alcohol abuse (n=1), which was not previously known. In the four remaining patients, repeated nocturnal hypoglycemia as well as unwanted further weight loss, typical clinical symptoms of cortisol deficiency, were anamnestic. In five patients, hydrocortisone substitution therapy was performed, which led to a cessation of hypoglycemia for a period of at least 3 months in four patients.

Conclusion

The incidence of adrenocortical insufficiency, especially in patients on opioid analgesic therapy or with an alcohol problem, but also in otherwise healthy patients with nocturnal hypoglycemia and excessive unintentional weight loss after bariatric surgery, is apparently underestimated. Hydrocortisone therapy in some of these patients may lead to symptom relief. Further prospective studies are recommended.

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EARLY EGYPTIAN EXPERIENCE WITH ROBOTIC-ASSISTED BARIATRIC SURGERY

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Background

The advent of robotic surgery heralded a new era for human surgical techniques. Robotic-assisted bariatric surgery is an increasingly popular alternative to the conventional laparoscopic approach. This has raised concerns about its cost, operative times, and its actual benefits to the patient, surgeon, and healthcare system over the conventional laparoscopic approach.

Objectives

To provide an early report of the first Egyptian case-series of robotic-assisted bariatric surgery and perioperative short-term outcomes (30-day outcomes).

Methods

All consecutive patients underwent robotic-assisted bariatric surgery by the same surgeon using the Versius® Surgical Robotic System by CMR with the assistance of one laparoscopic port. Patient demographic data, body mass index, operative times, hospital stay, complications and mortality in the 30 postoperative days were recorded.

Results

One hundred patients were included in the study (82 females - 82%), with a mean age of 39 years (range 29 to 55) and mean BMI of 43.85 (35.76– 56.19). Eighty cases underwent sleeve gastrectomy (Six of them had concomitant cholecystectomy and 2 had concomitant hiatus hernia repair), Six case had Roux en-Y gastric bypass, seven cases had one anastomosis gastric bypass and seven had revisional gastric bypass surgeries. Average console time was 124 minutes (range 70 to 260) and all cases had one-day hospital stay except one case “ischemic heart disease” who stayed 2 days for monitoring. Postoperative 30-days surgical complication rate was 1%, with only one minor complication (wound infection) (Clavien-Dindo grade I). There was no need for laparoscopic takeover or open conversion, no hospital readmission, and no mortality in the first 30 days.

Conclusion

Even with the very early experience, the robotic approach was safe and reproducible for the surgical treatment of the morbid obesity. Also, it might offer some advantages showing good outcomes and minimal complications.

Keywords: Robotic surgery, Robotic-assisted sleeve gastrectomy, Robotic-assisted gastric bypass, Obesity surgery, Bariatric surgery, Revisional surgery, Metabolic Syndrome, Robotic Surgical Procedures

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EARLY EXPERIENCE OF A BARIATRIC SURGICAL UNIT - THE FIRST 300**Pedro Soares-Moreira** - Francisco Marrana - Tiago Rama - Lilite Barbosa - Rita Peixoto - Gil Faria*Unidade Local de Saúde de Matosinhos, Dept. Surgery, Matosinhos, Portugal***Background**

Sleeve Gastrectomy (SG) and Roux-en-Y Gastric Bypass (RYGB) represent over 90% of bariatric-metabolic surgeries worldwide. Nonetheless it is fundamental that surgeons are familiar with, at least, the other surgical techniques endorsed by international societies as well as with revisional surgeries. It is also essential that bariatric surgery centers perform a continuous and judicious evaluation on the performed surgeries to assure safety, quality, continuous improvement, and cost-effectiveness.

Objectives

Description of the experience of a bariatric surgical center in Portugal with its' first 300 patients and comparison with current literature.

Methods

Retrospective analysis of 300 consecutive patients treated between January 2018 and June 2022.

Results

All patients were treated laparoscopically. Most patients were female (85%) and submitted to gastric bypass (45%) and gastric sleeve (41%). Other surgical procedures included: SADI-S (4%), OAGB (3%), gastric band removal (5%). The mean weight at surgery was 114,4Kg. Revisional surgery accounted for 14,3%. Most prevalent comorbidities were hypertension (51,7%), dyslipidemia (39,7%) and diabetes (25,3%). Abdominal wall hernias were present in ¼ of the patients. Mortality was 0,33% (1 patient, due to ARDS). There were six reinterventions (2%) due to incarceration of abdominal hernias (4), hemorrhage (1) and abscess (1).

Conclusions

Our results are mostly in accordance with current literature. There is a balanced distribution between SG and RYGB. Patients with abdominal hernias should be judiciously treated to avoid hernia-related complications.

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EARLY EXPERIENCE WITH LOOP BIPARTITION (LB) AS REVISIONAL PROCEDURE AFTER SLEEVE GASTRECTOMY WEIGHT GAIN: A MULTICENTER STUDY

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Background

Long-term weight regain (WR) rate after sleeve gastrectomy (LSG) reaches in some studies almost 40%. Different revisional surgery options have been proposed. In the present study we have analyzed our experience with loop bipartition (LB) with or without re-sleeve for the treatment of WR after LSG.

Objectives

To assess postoperative complication rate and early weight loss results of LB as revisional procedure after LSG.

Methods

We retrospectively reviewed our data on consecutive patients receiving LB after LSG from June 2019 and February 2023. The three centimeters length gastro-jejunal anastomosis was performed in two different ways: manual and mechanical, at the gastric antrum level. The re-sleeve was performed only in case of gastric dilatation of the previous sleeve.

Results

During the period considered 38 patients were included. The mean time between LSG and LB was 62 months. Before LB the mean BMI was 38.5 kg/m². Nineteen patients underwent to re-sleeve and 19 patients had two layers hand-sewn anastomosis. The mean loop length was 257.5 cm. Only patients with at least 6 postoperative follow-up months were included in the weight analysis. The mean follow-up length was 25.8 months. The mean BMI at 1 and 2 postoperative year was 28.5 kg/m² and 27.1 kg/m², while the mean %TWL was 22% and 31.5% respectively. Four patients had an early postoperative complication: one staple line leak and 3 postoperative anastomosis bleeding (10.5%). Four patients experienced a postoperative diarrhea and 10 patients a postoperative reflux needing proton pump inhibitors. One patient was reoperated on for excessive weight loss. We didn't record any statistical difference in terms of complications and weight loss results between patients with or without re-sleeve, and patients with mechanical or manual anastomosis. All the preoperative comorbidities markedly improved or resolved.

Conclusions

In conclusion, in the present study we showed that LB was effective and safe as a revisional technique after LSG long-term weight regain. In case of sleeve dilation, re-sleeve is necessary in order to obtain better results.

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EARLY WEIGHT LOSS AFTER BARIATRIC SURGERY IN PATIENTS WITH LIVER FAILURE OR TRANSPLANT

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Background

Obesity is linked to an increased risk of failure in multiple organ systems, including the liver. Non-alcohol-associated fatty liver disease (NAFLD) is comorbid with obesity in over 50% of patients, which can lead to fibrosis and end-stage liver disease. Bariatric surgery (BS) is a highly effective weight loss treatment. However, more studies are needed to examine its effectiveness in liver failure or liver transplant (LT) recipients, many of whom have fatty liver disease.

Objectives

To identify the effectiveness of BS in LT recipients at a high-volume transplant center serving a diverse population with high rates of metabolic syndrome.

Methods

Patient records of BS cases between May 2016 and June 2022, from which patients undergoing LT were identified. These cases were matched (2:1) on age, history of diabetes (DM), and type of BS to patients not receiving LT. The proportion of excess weight lost (EWL) was determined for 1, 3, 6, and 12 months post-BS. Non-parametric analyses; $p < 0.05$ for significance.

Results

1,680 BS were performed; 33 patients underwent BS for liver failure or LT (5 pre-LT, 14 at the time of transplant, 14 after transplant). After matching, 66 non-transplant controls and 33 patients with liver failure or transplant had gastric sleeve BS, 42 (42%) had DM, mean (SD) age was 53.5 (11.1) years, 46 (46%) were non-Hispanic white.

EWL after BS in patients with liver failure or no liver failure or by time to transplantation

Group	n	1 month, % (SD)	3 months, % (SD)	6 months, % (SD)	1 year, % (SD)
No transplant	66	12.9 (7.2)	25.0 (9.8)	39.1 (13.9)	47.3 (20.0)
Liver	33	16.7 (17.7)	34.0 (18.9)	42.7 (19.8)	58.0 (25.0)
P-value		0.0920	0.0004	0.0849	0.0446
Before txp	5	11.2 (8.4)	24.5 (12.1)	29.8 (24.6)	48.8 (25.5)
During txp	14	16.0 (26.5)	38.1 (26.1)	47.2 (22.1)	55.4 (26.8)
After txp	14	18.9 (8.3)	33.3 (10.0)	43.3 (14.2)	63.6 (23.7)
P-value		0.4389	0.0569	0.1638	0.8965

Conclusion

Response to BS in patients with liver failure or after LT was higher than controls at 3 months and 1-year after BS. LT recipients lost over half of their excess body weight.

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EASY-TO-USE AND INTERPRETABLE MACHINE LEARNING BASED CALCULATOR PREDICTING LONG TERM WEIGHT TRAJECTORIES AFTER BARIATRIC SURGERY: A SOPHIA INTERNATIONAL COHORT STUDY

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Background

Weight loss trajectories after bariatric surgery vary widely between individuals, while predicting weight loss before the operation remains challenging. We aimed to develop a model using machine learning to provide individual pre-operative prediction of the five-year weight loss trajectories after surgery.

Methods

We enrolled participants from ten prospective cohorts and two randomized trials in Europe, America, and Asia, with five-year follow-up after Roux-en-Y gastric bypass, sleeve gastrectomy or gastric band. The training cohort comprised patients from two centers in France. The primary outcome was body mass index (BMI) at five years. A model was developed using LASSO to select variables and CART to build interpretable regression trees. The performances of the model were assessed through the median absolute deviation (MAD) and root mean squared error (RMSE) of BMI.

Findings

10,231 patients were included, corresponding to 30,602 patient-years. Among 434 baseline attributes available in the training cohort, seven variables were selected: height, weight, intervention type, age, diabetes status, diabetes duration, and smoking status. At five years, the overall mean values (95% CI) of MAD and RMSE of BMI across external testing cohorts were 2.8 (2.6; 3.0) kg/m² and 4.7 (4.4; 5.0) kg/m², respectively, while the mean (SD) difference between predicted and observed BMI was -0.3 (4.7) kg/m². The corresponding online companion tool can help inform clinical decisions before surgery (<https://bariatric-weight-trajectory-prediction.univ-lille.fr/>).

Interpretation

We developed an machine learning-based model, easy to use and internationally validated, for predicting individual five-year weight loss trajectories after three common bariatric interventions.

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EFFECT OF BARIATRIC METABOLIC SURGERY ON CARDIAC FUNCTION IN PATIENTS WITH OBESITY: AN ECHOCARDIOGRAPHIC ASSESSMENT

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Obesity is becoming a global health issue with a plethora of medical and economic implications. Its prevalence has significantly increased in the past decade. Multiple comorbidities, such as metabolic syndrome, obstructive sleep apnea, dyslipidemia, hypertension, non-alcoholic fatty liver disease, and left ventricular (LV) hypertrophy, and diabetes mellitus are associated with adiposity. Regression of LV mass after bariatric metabolic surgical intervention has been documented and might have favorable effects on the long-term survival of obese patients.

Objectives

To analyze the clinical and echocardiographic changes in individuals with severe obesity who underwent bariatric metabolic surgery.

Methods

In total, 59 obese patients with body mass index >35 kg/m² were prospectively enrolled. We assessed baseline pre-operative and a 6-month post-operative lipid profile, hemoglobin A1c, echocardiography, lifetime, and 10-year risks of atherosclerotic disease for all patients.

Results

The mean patients' age was 37 ± 12 years, with 40 (67.8%) women. We found that the pre-operative total cholesterol (4.2 ± 1.1 vs. 4.4 ± 1.1 , $p=0.014$) and triglyceride levels (1.4 ± 0.7 vs. 1.8 ± 0.8 , $p<0.0001$) were significantly lower than post-operative levels, while post-operative high-density lipoprotein levels were significantly higher (1.5 ± 0.5 vs. 1.2 ± 0.3 , $p<0.0001$). The calculated 10-year risk of atherosclerotic cardiovascular disease was significantly lower post-operatively ($1.1 \pm 1.6\%$ vs. $1.6 \pm 1.8\%$, $p<0.0001$). Echocardiography follow-up revealed that diastolic dysfunction was more prevalent pre-operatively than that post-operatively (41% vs. 10%, $p<0.0001$). Post-operative left ventricular (LV) mass was significantly lesser than the pre-operative mass (168 ± 252 g vs. 187 ± 255 g, $p=0.019$), whereas the post-operative LV diastolic (46.5 ± 7 mm vs. 38.5 ± 18 mm, $p=0.002$) and systolic dimensions (31 ± 5 mm vs. 25 ± 11 mm, $p=0.001$) were significantly smaller.

Conclusion

Bariatric metabolic surgery resulted in a significant amelioration in lipid profile, reduction in LV mass, and LV cavity dimensions.

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EFFECT OF BARIATRIC SURGERY IN OLDER PATIENTS OVER THE AGE OF 55
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Background

Obesity-related complications in the elderly population are also increasing, so obesity treatment in elderly patients is emerging as a very important social problem. It is difficult to find studies on elderly obese patients published in Asian countries including Korea.

Objective

The present study intends to evaluate the effectiveness and safety of bariatric metabolic surgery by comparing and analyzing the postoperative outcomes of elderly obese patients and young obese patients.

Methods

Between January 2019 and December 2019, review of electronic medical records from 6 hospitals by 12 surgeons allowed identification of 410 patients who underwent bariatric surgery. Patients were categorized by age (≥ 55 years old and < 55 years old). We compared the surgical outcomes including post-operative complications, mortality and weight loss between the two age groups.

Results

The 39 elderly patients had lower median body weight (97.9 versus 113.2; $p < 0.001$) and higher rates of co-morbidities. No significant difference was observed between elderly and nonelderly patients for postoperative hospital stay (4.1 versus 4.0 days; $p = 0.773$). Elderly patients with post-operative 1-year data ($n=29$) were compared with nonelderly patients with post-operative 1-year data ($n=206$). There was significant difference between elderly and nonelderly patients for percent total weight loss (23.7 versus 27.8 %; $p = 0.014$), however, no significant difference was observed for percent excess BMI loss (78.4 versus 82.1 %; $p = 0.553$).

Conclusion

Bariatric surgery is safe in elderly patients with acceptable weight loss outcomes.

P-110

EFFECT OF BARIATRIC SURGICAL DRAINAGE ON TRANSIT IN PATIENTS WITH REFLUX SYMPTOMS; ONE ANASTOMOSIS GASTRIC BYPASS FOLLOWING SLEEVE GASTRECTOMY

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Background

Gastro-oesophageal reflux (GORD) following sleeve gastrectomy (SG) is a central challenge. Precise indications for revisional surgery have not been defined. Prior work indicates severe reflux syndromes are mediated by stasis above the incisura, leading to triggered deglutitive and post-prandial reflux events driving symptoms. We hypothesised supra-incisural drainage results in accelerated gastric clearance, reduced mechanical reflux events, and reduced oesophageal acid exposure.

Objective

We aimed to determine whether one anastomosis gastric bypass (OAGB) performed for reflux post-SG 1) accelerates gastric emptying half-time and gastric clearance, 2) reduces the incidence and severity of post-prandial macro reflux events and 3) improves reflux symptoms.

Methods

We undertook a prospective trial (ACTRN12616001089426) evaluating the physiological effect of a modified one anastomosis gastric bypass in severe reflux post-SG. There were 23 trial participants and 29 optimal SG (controls). A high-fidelity nuclear scintigraphy protocol was applied. High-resolution stationery manometry and pH as well as gastroscopy were performed to correlate these findings.

Results

Demographic data post-OAGB are as follows; 94% female, age 44.4 years, excess weight loss 47.7 %, and total body weight loss 12.6%. Conversion from SG to OAGB was at a median of 49 (IQR 54) months. Scintigraphy showed delayed gastric emptying in pre-OAGB 30 (IQR 14.5) vs controls 19 (IQR 5.5) minutes, $p=0.006$. Post-OAGB, rapid emptying 22 (IQR 8.5) minutes, $p=0.057$, with decreased number of reflux events post prandially (24.5 (IQR 8.3) vs 38 (IQR 14.3), $p=0.013$). This data correlated with the pH analysis; erect acid events significantly decreased post-OAGB 15 (IQR 79) vs 5 (IQR 14) events, $p=0.001$. Endoscopic findings indicated 70% patients had large amounts of bile stasis in the sleeve vertical compartment. Post-OAGB, the incidence of gastrostasis significantly reduced with bile staining in the pouch of 44% of patients ($p=0.045$).

Conclusions

This data suggests that gastric bypass is an effective treatment for stasis-induced reflux post-SG. The mechanisms are likely due to markedly accelerated gastric clearance, reduced mechanical reflux events, and reduced overall oesophageal acid exposure. This suggests that some forms of significant reflux are driven by gastrostasis and are amenable to treatment with drainage above the incisura.

P-111

EFFECT OF CORRECTIVE EXERCISE ON STATIC BALANCE, FOOD CONSUMPTION AND BODY COMPOSITION IN THE EARLY PERIOD AFTER BARIATRIC SURGERY

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Objective

To determine the effect of 3-month supervised corrective exercise applied in the period of rapid weight loss after bariatric surgery on static balance, food consumption, and body composition.

Method

21 volunteers who will undergo sleeve gastrectomy (SG) surgery to be the Corrective Exercise Group (CEG/7 N=10; BMI=42.13 kg/m²) and Control Group (CG/N=11; BMI=42.17 kg/m²) divided into 2 groups. Body compositions (Tanita MC-580) of all participants were determined before, and after surgery, anthropometric measurements and static balance measurements (TecnoBody Prokin 252) were made, International Physical Activity Questionnaire (IPAQ), Food Consumption Frequency Scale, Food Consumption Record questionnaires were applied. The CEG group was subjected to a corrective exercise program 3 days a week for 3 months starting from the 4th week after SG.

Results

Postoperatively, while body weight, BMI, fat mass, fat percentage, muscle mass, waist-height ratio, and internal adiposity values of all participants decreased ($p < 0.05$), the muscle percentage of the CEG group increased ($p < 0.001$). In the measurements related to balance, perimeter with eyes closed ($p = 0.015$), eyes closed ($p = 0.006$), ellipse area with eyes open ($p = 0.028$), and mean pressure center X (C.O.P.X.) with eyes open decreased statistically in both groups ($p = 0.025$). Eye open C.O.P.X. value difference was found to be higher in CG (mean difference=8.67; $p = 0.034$). The rate of increase in IPAQ values in both groups after surgery was higher in CEG ($p < 0.001$). While energy, protein, fat, CHO (carbohydrate), CHO percentage, fiber, and iron values decreased significantly after the surgery, protein percentage ($p < 0.001$), vitamin D ($p = 0.003$), and B12 ($p < 0.001$) values increased.

Conclusion

Eye Open C.O.P.X, which is the static balance indicator of 3-month supervised corrective exercise applied in the early period after SG surgery was found to have a positive effect on the static balance results. Although corrective exercise had no effect on food consumption, food preferences and body composition, the physical activity level in the CEG group was found to be significantly higher than in the CG group. In addition, with the effect of dietitian follow-up, it was concluded that after bariatric surgery, the tendency of all participants to sugary and high-fat foods decreased and they developed healthy eating habits.

P-112

EFFECT OF LAPAROSCOPIC SLEEVE-GASTRECTOMY ON DISTAL ESOPHAGUS AT 5 AND 10 YEARS

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Background

Sleeve-gastrectomy (SG) is one of the main surgeries in the management of obesity. However, the emergence of long-term esophageal complications such as gastroesophageal reflux disease (GERD) and its complications (esophagitis, endobrachyoesophagus (BE) or even adenocarcinoma) are currently described in the literature.

Objectives

The main objective of this study was to determine the presence or not of esophageal lesions (esophagitis and BE) at 5 and 10 years after SG in the same center.

Methods

582 patients had SG between 10/2010 and 12/2012 (291 patients) or 01/2015 and 12/2016 (291 patients). 291 (50%) patients were lost to follow-up. In the end, 291 (50%) patients were included. An upper gastro-intestinal endoscopy (UGIE) was performed preoperatively, at 5 years for 219 patients and at 10 years for 72 patients.

Results

Preoperatively, 19.6% of patients had clinical GERD, 13.1% had esophagitis, 2.7% BE with 1.4% of patients having metaplasia. At 5 years, 62.7% of patients had clinical GERD including 45.1% de novo, 27.4% had esophagitis including 19.6% de novo, 8.3% BE including 7.8% de novo with metaplasia in 1.8% of cases. At 10 years, 62.2% of patients had clinical GERD, including 55.8% de novo, 25.5% had esophagitis including 20.8% de novo, 8.4% de novo BE with metaplasia in 5.6% of cases. One patient had an adenocarcinoma at 10 years. The average percentage of excess weight loss was $37.38 \pm 35.08\%$ at 5 years and $26.79 \pm 29.08\%$ at 10 years. In multivariate analysis, preoperative esophagitis is a predictive factor for esophageal lesions at 5 and 10 years. Active smoking and preoperative esophagitis are predictors of esophagitis at 5 and 10 years.

Conclusion

This study revealed a significant increase in esophageal lesions at 5 and 10 years after SG. The presence of preoperative esophagitis is one of the elements that can lead to choosing an alternative technique to SG in surgical management of obesity.

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EFFECT OF LIRAGLUTIDE DURING LATE WEIGHT LOSS PHASE FOLLOWING SLEEVE GASTRECTOMY. OUR EXPERIENCE

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Background

Laparoscopic sleeve gastrectomy (LSG) and liraglutide both helps to reduce weight. We evaluated the effect of liraglutide facilitating total weight loss (TWL) and excess body weight loss (EWL) when added in late weight loss period after LSG.

Objective

To know the effect of Liraglutide in weight loss in addition to sleeve gastrectomy in later phase of weight loss.

Material and methods

Post operative patient of sleeve gastrectomy with BMI $>35\text{kg/m}^2$ undergoing LSG were subjected to receive liraglutide (subcutaneous) in increasing doses of 0.6 mg/day until maximum tolerated dose of 3.0 mg for a duration of 6 weeks to 6 months. Weight, BMI, %TWL, %EWL, HbA1c, fasting plasma glucose, resolution of type 2 diabetes mellitus, hypertension, dyslipidemia, sleep apnea and quality of life were evaluated.

Results

Thirty participants underwent LSG, were advised Liraglutide once they stopped reducing weight and/or started gaining weight. The mean dose of liraglutide was 1.41 ± 0.49 mg/day. Patients showed additional %TWL of 8.7 ± 5.7 and %EWL of 15.3 ± 3.2 . BMI decreased by 2.6 ± 1.3 after starting Liraglutide. All patients with diabetes or pre-diabetes had resolution of dysglycemia. with excess weight loss ,improvement in sleep apnea, quality of life noticed

Conclusion

Liraglutide added after LSG significantly augments weight loss from LSG in obese individuals.

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EFFECT OF PHYSICAL ACTIVITY AND EATING BEHAVIORS AMONG INDIAN PATIENTS UNDERGOING BARIATRIC METABOLIC SURGERY

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Background

Physical activity and eating behaviours are essential components of the preoperative evaluation for bariatric surgery patients. The goal of behavioural analysis is to identify any psychological factors that may impact the patient's ability to navigate the changes that come with bariatric surgery successfully.

Objective

This study sought to assess the effect of physical activity and eating habits among Indian patients undergoing bariatric surgery who adhered six months after the procedure.

Methods

A GQLI and QUASI experimental design were utilised for the study. Assessing the patient's eating habits, level of activity, psychosocial factors, substance use, and mental health in Indian patients undergoing bariatric surgery and comparing the postoperative 1 and 6 months.

Results

Of 522 study participants (mean [SD] age, 49.2 [13.1] years, male 67.4%), Sleeve Gastrectomy (SG) was performed in 136 patients. Roux-n-Y Gastric Bypass (RYGB) was performed in 178 patients, and One Anastomosis/Mini-Gastric Bypass (OAGB/MGB) was performed in 208 patients. There was a significant improvement in patients' consensus post-implementation of physical activity level and eating behaviours. The physical activity level pre-consensus mean score was 18.01 ± 4.03 , and the mean post score was 30.19 ± 5.04 , respectively. And eating behaviours pre-consensus mean score was 15.11 ± 3.13 , and the post-mean score was 35.22 ± 8.14 , respectively. The average percentage of total weight loss (%TWL) and resolution of comorbidities were significantly ($p=0.001$) improved. No Nutritional deficiencies were seen in patients at six months, but they were corrected with additional nutrient supplements and physical activity.

Conclusion

The results of these assessments can help inform treatment planning and identify areas where the patient may need additional support. For example, patients with low physical activity levels may benefit from working with a physical therapist or personal trainer to develop an exercise plan. Similarly, patients with a history of disturbed eating may require additional counselling and support to ensure a successful outcome after surgery.

Keywords: Physical activity, Eating behaviours, Bariatric surgery, Weight-loss, Quality of life

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EFFECT OF PREOPERATIVE INTRAGASTRIC BALLOON TREATMENT ON INTRA- AND POSTOPERATIVE OUTCOMES AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY - A RETROSPECTIVE COHORT STUDY

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Background

One of the methods for obesity treatment is an intragastric balloon (IGB) insertion. IGB does not cause permanent weight reduction, it is used as a bridging therapy in patients with body mass index (BMI) ≥ 50 kg/m². The definitive treatment is bariatric procedure as so far it is the only option for permanent weight loss.

Objectives

We arranged a single-centre retrospective study to evaluate whether pre-operative IGB treatment influences perioperative and postoperative weight loss outcomes after LSG with particular emphasis on the impact of post-IGB percentage of excessive weight loss (%EWL) on post-LSG %EWL.

Methods

Patients were treated in two stages: IGB placement followed by LSG. Patients were divided into the following groups considering %EWL after IGB:

Group 1 $\leq 10,38$

17,27 \geq Group 2 $> 10,38$

24,86 \geq Group 3 $> 17,27$

Group 4 $> 24,86$

1 year after LSG follow-up data have been collected. The following parameters were compared between groups: operative time, total blood loss, length of stay and weight, BMI, percentage of total weight loss (%TWL), %EWL.

Results

The average operative time and total blood loss was the shortest in group 2 and the longest in group 1. Length of hospital stay was comparable between group 2, 3 and 4 (3 days), in the group 1 it was 3.5 days. Both weight and BMI were the highest in group 1 and the lowest in group 4. %EWL and %TWL was the largest in group 2 and 3.

Conclusion

The present study confirmed the impact of weight reduction on IGB on perioperative and postoperative weight loss after LSG. The largest %EWL after LSG occurred in patients who lost intermediate values after IGB (neither the lowest %EWL nor the largest %EWL). The most promising results were obtained in the middle groups. While the reason for the poor result in group 1 (the lowest %EWL) could be poorly motivated people who did not comply with the recommendations. On the other hand, in group 4 (the largest %EWL), weight loss can be poor, due to the fact that weight has been already lost in the first stage of treatment.

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EFFECT OF RACE AND ETHNICITY ON WEIGHT LOSS 10 OR MORE YEARS AFTER COMPLETING GASTRIC BYPASS AS AN ADOLESCENT

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Background

Previous studies have reported long-term post-Roux-en-Y Gastric Bypass (RYGB) weight loss outcomes are more durable in non-Hispanic whites (NHW) versus non-Hispanic blacks (NHB) and Hispanic adults, but less is known among those who completed RYGB as an adolescent. This study compared long-term post-RYGB weight outcomes by ethnicity.

Methods

85 patients who completed RYGB at ≤ 21 years of age in a private practice bariatric program from 2002-2010 were contacted for a telehealth visit. Body weight, co-morbidity status, social/physical function status, and long-term complications were evaluated 10-to-18 years post-surgery by ethnicity. Percentages of post-MBS excess weight loss (EWL%) and BMI changes from initial to current weight were compared by ethnic/baseline BMI groups using one-way Analysis of Variance.

Results

Mean participant (83% female, 73.9% Hispanic, 16.7% NHW, and 9.4% NHB, 88.5% had gastric bypass) age at surgery was 18.8 (± 1.6) years (median age 19 years, range 15-21 years). Mean pre-MBS BMI was 45.6 (± 3.9) kg/m², 50.8 (± 9.6) kg/m², and 46.0 (± 6.3) kg/m² for NHW, NHB, and Hispanics, respectively; 12.5% NHW had a pre-MBS BMI ≥ 50 kg/m² vs. 33.3% among NHB (P=0.31) and 25.7% among Hispanics (P=0.34). EWL% was not significantly different by ethnicity (67.6% ± 38.2 Hispanics, 58.5% ± 23.3 NHW, 71.8% ± 29.7 NHB, P=0.62) at 10-to-18 years post-RYGB. Ethnic group changes in BMI were similar to EWL% changes.

Conclusions

Up to 18 years post-RYGB, mean EWL and BMI reduction patterns are similar among all ethnic groups. Our findings suggest that RYGB is an effective, durable weight loss treatment option for all adolescent ethnic groups.

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EFFECTIVENESS OF THE GASTRIC BAND AT 5 YEARS

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Background

Obesity is a major public health problem in Europe (59% of adults are overweight). Bariatric surgery has gained popularity to fight this growing trend, particularly through the fitting of gastric bands.

Objectives

The objective is to assess the weight loss as well as the remission rate of comorbidities. The judgment criteria secondary is the rate of complications directly related to the devices.

Methods

We carried out a monocentric retrospective study, based on the analysis of files of patients having benefited from a gastric band in 2018. We studied 207 patients (157 women and 50 men), with a median age of 35 years (16 - 70 years). The average follow-up time is 1176 days (33% lost to follow-up). The median initial weight was 100 kg (range 74-170 kg), with correspond to a gain of 5.1 BMI points. (range 20.9 to 106.9 kg). The initial BMI is 39.68 kg/m² (range 31.86 - 60.06 kg/m²).

Results

The current average BMI is 34.5 kg/m² (21 - 45 kg/m²) is a gain of 5.18 BMI points.

Regarding remission of comorbidities:

- 170 patients had joint pain. They disappeared for 10% of them (18 patients) and decreased for 30% (51 patients)
- 28 patients suffered from high blood pressure: 28% one no longer suffer from it (8 patients)
- 28 patients were treated for dyslipidemia, it is no longer present in 25% of them (7 patients)
- 8 patients were diabetic, treatment was stopped for 2 patients (25%)
- 49 patients were fitted for sleep apnea syndrome, 18% no longer need of this equipment anymore (9 patients)
- 10 patients had hepatic steatosis on inclusion. It is still present for all patients.

Regarding the secondary endpoint, we can note that 38 patients benefited from removal of their gastric band: 22 for poor tolerance, 3 to perform a sleeve gastrectomy, 5 for non-effectiveness and 10 for complications: 4 case of leaks, 1 case for a migration, 4 ring slips and 1 box rotation.

Conclusion

The gastric band helps to reduce the BMI and reduce the harmful consequences of obesity.

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EFFECTS OF DIET-INDUCED WEIGHT LOSS AND ROUX-EN-Y GASTRIC BYPASS ON THE GLYCEMIC AND GUT HORMONES PROFILE IN PATIENTS WITH SEVERE OBESITY AND DIABETES

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Background

The mechanisms following glycemic control after RYGB are still not fully elucidated.

Objective

To compare the effects of similar weight loss induced by a very low calorie diet (VLCD) and Roux-en-Y gastric bypass (RYGB) on the glycemic and gut hormone profile in patients with severe obesity and T2DM.

Setting

Tertiary University Hospital Methods: 10 patients were evaluated before (pre 0), after 10% weight loss induced by VLCD (pre 1) and after 10% weight loss induced by RYGB (post). Oral glucose tolerance test (OGTT) were performed in pre 0 and pre 1. In all periods glycemic (glycemia, insulin) and gut hormone profile (Ghrelin, GIP and GLP1) were evaluated in fasting condition (T0) and 30, 60, 90 and 120 minutes after a standard meal (Nutren 1.5®).

Results

In pre 0 all patients and in pre 1 only 5 patients had glycemia > 200 mg/dL in OGTT. There was an increase in ghrelin levels at T0 in pre 1 ($p < 0.001$). There was no difference in GIP levels. There was a significant increase in GLP1 levels between pre 0 and pre 1 ($p < 0.004$) at T0 and between pre 1 and post at all times ($p = 0.01; 0.002; 0.002; 0.01; 0.04$).

Conclusions

50% of patients had glycemic control after diet-induced weight loss. After RYGB all patients had improved glycemic control. There was an increase of GLP1 after weight loss by diet only in fasting and at all times after surgery.

Keywords: Diabetes mellitus; Incretins; Very low calorie diet; Glucagon-like peptide 1.

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EFFECTS OF METABOLIC SURGERY IN PATIENTS WITH BMI >40KG/M2 ON HOMA-IR AND LIPID PROFILES

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Introduction

Obesity is the primary cause of metabolic disorders such as diabetes mellitus, NAFLD, hypertension, cardiovascular disease, and dyslipidemia, all of which are directly associated with higher mortality and unfavourable clinical outcomes. Metabolic surgery is an effective treatment for managing obesity when compared to lifestyle control and medication. Several studies have demonstrated that metabolic surgery significantly reduces metabolic comorbidities and risk factors.

Objective

The purpose of this study is to ascertain the impact of metabolic surgery on the HOMA-IR and lipid-lipoprotein profile within six months in individuals with extreme obesity (BMI >40 kg/m²).

Methods

In this prospective observational study recruited a total of 23 patients aged 21-66 years with BMI >40kg/m² applied metabolic surgery at Indraprastha Apollo Hospital, New Delhi. Sleeve gastrectomy (SG) (n=16) or Roux-en-Y gastric bypass (RYGBP) (n=7) surgical procedures were applied to the patients. Blood samples were collected at baseline and six months after Bariatric surgery. Data on sociodemographic characteristic, weight, body mass index (BMI), fasting blood glucose, HOMA-IR, triglyceride, total, LDL and HDL cholesterol levels were assessed. Repeated measures ANOVA was used to evaluate the differences and p value.

Results

There were statistically significant decreases between baseline and postoperative 6 month weight, body mass index (BMI), fasting blood glucose, HOMA-IR and triglyceride levels (p<0.001). As for there was no statistically significant relationship between total cholesterol, LDL and HDL cholesterol levels between these time periods (p<0.05).

Conclusion

The present study showed that metabolic surgery effectively reduces body mass index and improves fasting blood glucose, insulin resistance and the expected improvement on lipid profiles in patients with BMI >40kg/m².

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EFFECTS OF METABOLIC SURGERY ON FATTY LIVER DISEASE

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Background

Fatty liver associated with obesity and metabolic diseases is implicated in the development of liver cirrhosis and hepatocellular carcinoma, but no treatment has been established so far. Many patients who should undergo metabolic surgery (MS) developed fatty liver, and fatty liver is likely to be improved after MS. However, fatty liver is not eligible for metabolic surgery as a metabolic disease in Japan.

Objective

To confirm the effect of MS on improvement of fatty liver.

Methods

Patients who underwent MS between October 2010 and September 2021 were included. CT scans were evaluated both before and after surgery within 6 months, and improvement of fatty liver was evaluated by using the difference in attenuation value between the liver and the spleen (L/S ratio). NAFLD fibrosis score (NFS) was used as an index of liver fibrosis.

Results

54 patients were included in this study. Their median age was 46(29-63) years, male to female ratio was 24:30, BMI was 43.6(32.2-75.5), 43 patients underwent sleeve gastrectomy (SG) and 11 patients underwent SG + bypass. The time from surgery to CT imaging was 12 (6-76) months, BMI at imaging was 31.7 (23.6-55.9), and excess weight loss (%EWL) was 63.3 (14.8-118.8) %. The preoperative L/S ratio was 1.09 (-0.22-2.13), and 19 patients (35.2%) had an L/S ratio <0.85, which is an indicator of fatty liver. NFS was -0.014 (-2.68-4.04) preoperatively, and 17 patients (31.5%) had a high cutoff value of 0.676 or higher with a positive predictive value of 90%, while postoperatively it decreased to -1.35 (-3.58-1.56) ($p < 0.0001$) with 3 patients (5.6%) having a high cutoff value or higher.

Conclusion

Fatty liver can be improved by MS and should be included in metabolic diseases that are indication for surgery.

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EFFECTS OF ONE-ANASTOMOSIS-GASTRIC- BYPASS COMPARED TO SLEEVE GASTRECTOMY ON DIABETES MILLETUS ACCORDING TO ITS SEVERITY USING AND INDIVIDUALIZED METABOLIC SURGERY SCORE

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Objective

To compare the effect of one-anastomosis-gastric bypass (OAGB) and sleeve gastrectomy (SG) on blood sugar (FBS) control and improvement of type 2 diabetes (T2DM) according to its severity.

Background

One-anastomosis-gastric bypass (OAGB) and sleeve gastrectomy (SG) account for the vast majority of bariatric procedures in the Middle East in patients with T2DM. However, there are no clear guidelines to determine which procedure is more effective for long-term blood glucose control in this group of patients.

Methods

We reviewed the files of 283 patients with T2DM who underwent OAGB and SG in a bariatric center at an academic hospital who had a minimum of 2-year follow-up. Data collected included general demographics of the patients, type of the procedure, preoperative and postoperative number of anti-diabetic medications (oral and insulin), HbA1C and FBS. Patients were classified into three groups according to severity of T2DM using an Individualized Metabolic Surgery (IMS) score that was previously validated in another study.

Results

At a median postoperative follow-up of 4 years (range 1-7), diabetes remission (HbA1C <6.5% off medications) was observed in 61.7% after OAGB and 23.8% after SG ($P < 0.005$). IMS score was used to divide patients into three groups. In mild T2DM (IMS score ≤ 25), both procedures significantly improved T2DM. In moderate ($25 < \text{IMS score} < 95$) T2DM, both procedures showed to be effective in improving diabetes with better outcomes for OAGB than SG. In severe (IMS score > 95) T2DM, both procedures showed to be less effective in T2DM resolution but with more promising results in OAGB than SG.

Conclusions

Using a scoring system to stage T2DM according to severity, OAGB seems to be effective in improving T2DM and controlling blood sugar in all stages; while SG showed good outcomes in patients with mild T2DM but not in those in the severe category.

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EFFICACY AND SAFETY OF JEJUNOJEJUNOSTOMY REVISION AFTER ROUX-EN-Y GASTRIC BYPASS

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Background

Gastro-esophageal reflux is a potential indication for gastro-entero revision in patients after bariatric surgery. However, there is currently no consensus on the indications for jejunojejunostomy (JJ-stomy) revision after Gastric bypass.

Objective

To evaluate the efficacy and safety of JJ-stomy revision after Roux-en-Y gastric bypass.

Methods

This retrospective study analyzed data from 2017 to 2022. Thirty-two patients were included and underwent JJ-stomy revision. Patients had a median follow-up of one year. The primary outcome was indications for surgery and improvement of those indications; abdominal pain, nausea and vomiting, diarrhea, obstipation, and reflux disease. Secondary outcomes were kind of revision and minor and major complications (clavindindo-classification).

Results

In total thirty-three patients underwent JJ-stomy revisions. Indications were abdominal pain, nausea and vomiting, diarrhea, obstipation, and reflux disease some patients had more than one indication. Twenty-one (64%) patients received an extension of the stoma, and in 12 (36%) patients a new stoma was created. At 12 months after revision surgery, there were significant improvements in abdominal pain (56% versus 28%, $p = 0.012$), nausea and vomiting (41% versus 16%, $p = 0.039$), and reflux disease (59% versus 34%, $p = 0.021$). Other indications did not improve: diarrhea (25% versus 19% $p = 0.625$) and obstipation (15.6% versus 18.8% $p = 1.000$). Five (15.2%) patient had a minor complication three patients experienced persistent bile vomiting requiring readmission, one had a decrease in hemoglobin level, and one developed an ileus. Two (6.1%) patients had a major complication due to leakage for which radiological drainage.

Conclusion

Revision of JJ-stomy can lead to significant improvement in symptoms of abdominal pain, nausea and vomiting, and reflux disease in patients who have undergone Gastric bypass. However, it is important to perform appropriate diagnostic tests before making the decision to proceed with a revision, and to carefully consider the indications for revision. Patients who undergo a revision procedure should be closely monitored postoperatively, as they have a higher risk of complications compared to primary bariatric patients.

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ENDOSCOPIC MANAGEMENT OF LEAK POST BARIATRIC SURGERY: ALGORITHM OF PATIENT CARE

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Background

There is significant morbidity and mortality of leak post bariatric surgery. The management has been challenging and controversial.

Objectives

The aim is to develop an algorithm that guides our care for post bariatric leak to standardize our post operative management.

Methods

We present our protocol of management of leak post bariatric surgery. In case of leaks within 6 weeks after sleeve gastrectomy (SG) the leak is ≤ 10 mm, endoscopic double pigtail will be inserted. If abnormal anatomy is noticed or the leak is ≥ 10 mm, full covered mega stent will be placed. However, upon presentation of ≥ 6 weeks post SG, endoscopic septotomy is performed. Conversion procedure is offered if chronic leak continues ≥ 3 months. Patients with leak from jejunojunostomy after RY gastric bypass (RYGB) will go for diagnostic exploration. Leak at gastric pouch or at gastrojejunostomy will be dealt according to its size with double pigtail or 15 cm length stent. Leaks after one anastomosis gastric bypass (OAGB) at gastrojejunostomy will have primary repair or conversion to RYGB, while leaks from gastric pouch will be treated by double pig tail if leak is ≤ 10 mm and by 15 cm length stent.

Results

Seven patients were treated according to our protocol from August 2018 till August 2022. One patient presented with post SG leak after 6 months, for which she had endoscopic septotomy. Two patients with early leak post sleeve were treated by fully covered megastent. One post SG leak patient was treated conservatively. Post RYGB leak was treated by 15 cm fully covered stent to bridge 15 mm leak at angle of Hiss after 3 weeks of index surgery. A leak post RYGB patient that was complicated by pancreatic injury was treated successfully by over-scope clip. A case of leak at stapler line after OAGB was managed conservatively. Follow up was 12- 39 months. Mortality was zero. Leak heal success was 100%. Complications included migration of post RYGB that required reposition.

Conclusion

Introduction of evidence based institutional guidelines for management of leak after bariatric surgery standardizes patients' care and improves healing rate.

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ENDOSCOPIC SLEEVE GASTROPLASTY IN CLASS-I OBESITY: WEIGHT LOSS AND METABOLIC OUTCOMES

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Background and Aim

Endoscopic sleeve gastropasty (ESG) is a novel, moderately invasive technique that has gained standing in the past few years. Patients ineligible for bariatric surgery due to comorbidities or low Body Mass Index (BMI) were offered ESG. Here we report weight loss and metabolic outcomes who underwent ESG to treat class-I obesity.

Methods

This was a single-centre cross-section cohort study. The same surgeon performed all procedures. Patients with a BMI of 30 to < 35 kg/m² underwent ESG to treat class-I obesity. Patients who had systematically followed four years follow-up after their procedure were appraised. Data collected on weight loss and metabolic outcomes were analysed and presented.

Results

A total of 58 patients underwent ESG over a study period. Thirty-seven patients (63.8% female) with a mean age of 38.89±13.25 years and a mean body mass index of 30.79±0.69 kg/m² underwent ESG. The mean percentage total weight loss (%TWL) at 1-2-3 and 4 was 20.12±4.32 [95%CI:19-11-21.23], 19.26±5.11[95%CI:18.31-20.66], 18.92±92[95%CI:17.26-19.29] and 18.02±3.31[95%CI:16.20-19.12] respectively. Resolution/improvement of comorbidities was 64.58% cases of hypertension, 72.72% cases of dyslipidaemia, and 92.68% remission were in obstructive sleep apnoea. The complaints of nausea or abdominal pain were controlled with medications during the first week after ESG. No patient required an emergency intervention, and there was no mortality or significant morbidity.

Conclusion

This study shows acceptable outcomes, patients with a BMI of 30 to < 35 kg/m² have undergone ESG to treat Class-I obesity at our centre. There is a need for more reports with this approach to determine the amount and duration of weight loss and metabolic outcomes intervention.

Keywords: Endoscopic Sleeve Gastropasty, Class-I obesity, Weight loss, Metabolic outcomes.

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ENDOSCOPIC VACUUM THERAPY MANAGEMENT OF GASTRO BRONCHIAL FISTULA POST BARIATRIC SURGERY

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Gastric leaks constitute some of the most severe complications after bariatric surgery. Despite the complication (5% in primary cases and 20% in revisional cases) the rate in post-bariatric surgery of gastric leaks are low. Persistent gastric leak can increase the risk of forming a gastro- bronchial fistula which is rare but a critical complication. Due to the increase of these type of surgery, the need of having safe and effective therapies available for complications is crucial forpatient's outcome. The treatment is difficult and extensive, therefor, havingless invasive and outpatient options is essential. Endoscopic vacuum therapy (EVT) has emerged in recent years as a potential option for management of acute or chronic luminal defects.

Methods

We retrospectively analyzed 3 cases, collected in a prospective data base, of gastro-bronchial fistula refractory to endoscopic treatment with endo-luminal pigtail drainage and parenteral nutritional support.

Results

Three female patients, with ages between 45 to 50 and gastro-bronchial fistula post laparoscopic sleeve gastrectomy solved with EVT were included. The average treatment time was between 6-8 months with replacement of the vacuum sponge endoscopically about 4 to 6 times on each one of the patients.

Conclusion

Endoscopic Vacuum therapy for gastro-bronchial fistula in stable patients hasshown to be an effective and conservative procedure when the other options have failed, achieving the defect closure, maintaining a continuous endoluminal drainage and allowing periodic endoscopic revisions. All of these with the purpose of being able to offer and ambulatory and safe treatment increasing the patient quality of life.

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ENHANCED RECOVERY AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY: A PRACTICAL EXPERIENCE IN A DAY-SURGERY CENTER IN CHINA

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Background

The increase in bariatric surgeries burden patients and the health care system in short term. With the demands of bariatric surgery keep growing in China and worldwide, more medical resources need to be utilized. The day surgery center is mostly available during weekends in China. A pathway through the day surgery center based on the concept of enhanced recovery after surgery was developed to reduce medical cost and to make full use of medical resources.

Objectives

To assess the safety and cost-effectiveness of a clinical pathway in a day-surgery center for Laparoscopic Sleeve Gastrectomy in China.

Methods

Patients eligible for Laparoscopic Sleeve Gastrectomy were grouped into 2 different pathways during clinic visits by the surgeon from Mar. to Dec. 2021. The routine pathway (RP) and the day surgery center pathway (DSP) have different time and ward schedule for preoperative examinations, patient educations and perioperative management with the full-cycle management of bariatric surgery to enhance the postoperative recovery. A retrospective electronic medical record analysis of the LOS, HC, and complication, readmission, and reoperation rates were conducted and data were compared between the two groups.

Results

348 patients were included in the study (RP, 267; DSP, 81). Compared with RP, the LOS were decreased significantly by 53.2% ($p < 0.01$), while the POD of discharge, and HC decreased significantly by 17.2% and 15.2% ($p < 0.01$). 30-day complication, reoperation and readmission rates were low, and no significant differences were found between two pathways.

Conclusion

The day surgery center pathway for the management of bariatric surgery led to a reduction of POD of discharge, LOS and HC, while the rate of postoperative complications remained low. The day surgery center pathway is feasible, safe, cost-effective and through which the medical resources in the day surgery center during weekends can be fully utilized, and more patients' demands can be met.

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ENTRAPMENT OF A NASOGASTRIC TUBE IN THE STAPLER LINE DURING LAPAROSCOPIC SLEEVE GASTRECTOMY: A CASE REPORT

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Background

Obesity is a complex and multifactorial disease that has become a global health problem due to its increasing prevalence and potential serious complications. Bariatric surgery, such as laparoscopic sleeve gastrectomy (LSG), has been developed as a method to combat obesity. However, LSG can have various complications, including infections, thromboembolic events, anastomotic leaks, and complications related to stapler lines, such as the entrapment of materials like nasogastric tubes (NGT).

Objectives

This case report aims to emphasize the importance of proper communication and equipment handling between the anesthesia and surgical teams to prevent preventable complications during LSG procedures. It also highlights the use of intraoperative endoscopy to identify any staple line disruptions and the timely intervention required in the management of bariatric surgical complications.

Methods

A 53-year-old female patient with type II diabetes mellitus and essential hypertension underwent LSG. During the procedure, it was discovered that the NGT placed for mide aspiration was not removed and had become entrapped in the stapler line, resulting in a leak. The trapped NGT was subsequently removed, and the staple line was repaired. The patient was closely monitored, and there were no complications postoperatively.

Results

Close communication and cooperation between the anesthesia and surgical teams enabled the identification and timely management of the entrapped NGT, preventing further complications. The use of intraoperative endoscopy was not required in this case as the disruption in the staple line was visible during the laparoscopy. The patient recovered without any complications postoperatively and had a successful outcome.

Conclusion

The safe management of bariatric surgery complications is a vital component of successful surgery. Ensuring the proper handling of all equipment and monitoring the integrity of the stapler line can prevent complications such as the entrapment of NGTs. Improving communication and close cooperation between the anesthesia and surgical teams can lead to better patient outcomes. Rapid diagnosis and timely intervention are crucial in the management of bariatric surgical complications to reduce morbidity and mortality.

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EPIDEMIOLOGICAL DISCREPANCIES BETWEEN INDIAN AND GREEK BARIATRIC CANDIDATES

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Introduction

Obesity has been characterized as a pandemic, nevertheless it constitutes a diverse entity, with phenotypical and epidemiological heterogeneity across different ethnic populations.

Methods

We compared Indian and Greek patients living with obesity who presented for metabolic bariatric surgery during 1/1/2022–31/12/2022, based on their preoperative workup. The items examined were age, sex, smoking status, preoperative BMI, and the presence of usual comorbidities, including hypertension (HTN), type 2 diabetes mellitus (T2DM), dyslipidemia (DLP), and obstructive sleep apnea (OSA). Categorical data are presented as frequencies (%). Continuous data are presented as means \pm SD (range). The two groups were compared with Fisher's exact test (categorical data) and unpaired *t*-test (continuous data).

Results

The Indian cohort consisted of 2,093 patients (44.3% females), with a mean age of 44.1 years \pm 12.1 (16–76) and a mean BMI of 42.1Kg/m² \pm 9.2 (21.2–78.7). There were 117 reoperations (5.59%). There were 124 current smokers (5.92%) and the distribution of comorbidities was as follows: HTN 831 (39.7%), T2DM 695 (33.2%), DLP 531 (25.37%), OSA 1,340 (64.0%). Respectively, in the Greek cohort, there were 143 patients (61.5% females), with a mean age of 39.5 years \pm 10.5 (17–64) and a mean BMI of 46.8Kg/m² \pm 7.9 (28.6–66.6). There were 14 reoperations (9.8%). There were 53 current smokers (37.1%) and the distribution of comorbidities was: HTN 50 (35.0%), T2DM 19 (13.3%), DLP 21 (14.7%), OSA 27 (18.9%). When comparing the two groups, there were statistically significant differences in sex, smoking status, T2DM, OSA ($p < 0.0001$, for all), as well as DLP ($p = 0.0035$). Additionally, Greek bariatric candidates were younger ($p < 0.0001$, 95%CI 2.6–6.6), and had a higher preoperative BMI than their Indian counterparts [$p < 0.0001$, 95%CI (-6.2)–(-3.2)].

Conclusions

Indian bariatric candidates were more likely to suffer from obesity-related health problems as compared to their Greek counterparts. Conversely, it could be postulated that Indian bariatric candidates had a stronger metabolic component as the indication for surgery, whereas Greek candidates primarily presented for purposes of weight loss.

P-129
ERAMBS: THE TAP BLOCK IN ROUX-EN-Y GASTRIC BYPASS. RETROSPECTIVE UNICENTER STUDY

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Background

Transversus abdominis plane block (TAP block) is a regional anaesthetic technique for perioperative pain management of abdominal procedures. Scientific data about the role of TAP block in bariatric surgery are heterogeneous. Although 2 meta-analyses randomized controlled trials with 617 and 500 patients exists, there was high statistical heterogeneity across studies. Therefore, it seems difficult to derive a general recommendation for TAP in bariatric surgery.

Objectives

The goal of this study is to accompany the implementation of the laparoscopic TAP block (L-TAP) as a component of the standardized treatment path at our bariatric surgery facility.

Methods

The study was planned as unicenter, retrospective cohort observational study. Arm 1: Patients treated without L-TAP. Arm 2: patients treated with L-TAP (bilateral infiltration of 75mg/20ml ropivacaine per side.) The study was conducted in 2021 and 2022. Pain scores (Visual Analog Scale, VAS, 0-10) were recorded every 8 hours from the time point 1 hour after surgery until 72 h after surgery.

Results

The total number of patients studied was 360. L-TAP block was received by 139 consecutive patients, compared with a cohort of 221 patients who received gastric bypass without L-TAP. After excluding cases with missing pain values, 201 cases (91%) without L-TAP and 111 cases (80%) with L-TAP are available for statistical evaluation. A statistically significant difference (Mann-Whitney U-test) was found at the 1 hr time point. (L-TAP: 2,76 VAS, no-L-TAP: 3,84 VAS, $p < 0.001$). There was no relevant VAS-difference 8 hours and longer after surgery. The requirement of narcotic and pain medication was in the first 24h after the operation significant different. Length of hospital stay (LOH) and complications did not differ significantly.

Pain Medication requirement	NO-L-TAP	L-TAP	p
Dynastat (yes)	190 (96%)	72 (66%)	<0.001
Oxycodon (yes)	62 (35%)	25 (23%)	0.035
complications (n)	14 (7%)	10 (9%)	0.51
LOH (days)	3.1 (SD 0.6)	3.0 (SD 0.7)	0.12

Conclusions

TAP in RYGB is associated with significantly less postoperative pain at 1h compared to no-TAP and significantly less narcotic demand compared to no TAP.

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ESTABLISHMENT AND EXPERIENCE OF BARIATRIC SURGERY IN A TERTIARY CARE HOSPITAL OF A DEVELOPING COUNTRY-A START FROM NOTHING

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Background

Obesity is a syndrome which affects every organ of the body and has now become pandemic. Health care cost used in the management of associated problems (diabetes mellitus, hypertension, hypercholesterolemia, osteoarthritis, fatty liver.) of obesity has drawn attention to the treatment obesity. Lot of money used in the treatment of obesity and its associated problems, will be saved that is specially important for developing countries like Pakistan. Bariatric surgery is the most effective way of helping people with obesity reduce their weight.

Objective

To establish bariatric surgery in Faisalabad and determine the effect of surgery on obesity and its related problems.

Design

Randomised controlled trial.

Setting

Faisalabad Medical University and affiliated Hospitals.

Duration

Four years from February, 2018 to February 2022.

Sampling

Non probability consecutive sampling.

Materials and Methods

A sum of 240 patients of both gender having age between 20 -60 year diagnosed clinically as having Class 3 obesity (according to inclusion criteria) were incorporated in the study. Same team of trained consultants operated on all the patients. All patients were followed up for 3 years after surgery for loss of excess weight and resolution of diabetes mellitus, hypertension, hypercholesterolemia, osteoarthritis and Fatty liver.

Results

Out of 240 patients, 67%(160) were female and 33%(80) were male. 65%(155) patients underwent laparoscopic sleeve gastrectomy, 35%(85) underwent minigastric bypass. Among 155 patients who underwent LSG, 77%(120) patients demonstrated desirable weight loss while 23%(35) patients didn't show satisfactory weight loss. Among 120 patients who achieved desirable weight loss after LSG, all had resolution of obesity related problems. Among 35 patients who did not show satisfactory weight loss, 86%(30) patients did have resolution or improvement of obesity related problems. Out of 85 patients who underwent MGB, all demonstrated desirable weight loss and all exhibited loss of obesity related problems.

Conclusion

Bariatric surgical techniques both LSG and MGB are effective way of weight reduction and treatment of obesity related problems. Both techniques are safe and easy to learn for beginners to start bariatric surgery.

Keywords: Bariatric surgery, safe, excess weight loss, obesity related problems.

P-131

EVALUATION OF GASTRIC PH IN PATIENTS UNDERGOING A NEW BARIATRIC SURGERY TECHNIQUE IN BRAZIL

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Background

Obesity is a comorbidity whose relevance is due to its prevalence, which has doubled in more than 70 countries since 1980, including Brazil, and is growing continuously, being considered a pandemic. One of the ways of treating obesity is surgical intervention, whose techniques are classified as restrictive, disabsorptive and mixed. Among the most performed surgeries in Brazil, the Roux-en-Y Gastric Bypass (RYGB) stands out, corresponding to 75% of the procedures. As an alternative to RYGB, there is the One Anastomosis Gastric Bypass (OAGB) technique, a procedure that comprises the creation of a long and narrow gastric pouch in the lesser curvature, with approximately 100-150 ml. Subsequently, a gastrojejunostomy is performed approximately 200 cm from the ligament of Treitz. Thus, this technique requires one less anastomosis than RYGB, making it faster, cheaper and simpler. Although both procedures are recognized as effective, the anatomical and physiological changes caused by bariatric surgeries can result in important future implications for the quality of life of patients. The pH change is one of the consequences and despite being a relevant factor for the follow-up resulting from the intervention, once it has implications for drug metabolism and protein hydrolysis, the change in post-bariatric gastric acidity is still little studied in the medical literature.

Goals

To measure and compare the pH of the gastric pouch of patients submitted to the surgical techniques of OAGB and RYGB.

Methodology

Longitudinal and prospective study carried out in 10 patients who underwent bariatric surgery at the Obesity Outpatient Clinic of the Hospital das Clínicas da UNICAMP between 2022 and 2023. Laboratory analysis of the pH of the gastric contents obtained by endoscopy in the pre and postoperative period will be performed.

Results

Since the study is ongoing, requiring the collection and laboratory analysis of gastric contents from some patients, not all results have been obtained until the present moment.

Conclusion

Gastric content samples are being collected for later pH measurement, and will be presented until the congress. It is important to emphasize that OAGB surgery is not approved in Brazil and this study may provide an understanding of postoperative physiology.

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EVALUATION OF CHANGES IN THE LIVER STIFFNESS BEFORE – AND 3 MONTHS AFTER BARIATRIC SURGERY USING ACUSON SEQUOIA® AND FIBROSCAN®

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Background

In patients with obesity, the rightful diagnosis of non-alcoholic fatty liver disease (NAFLD/NASH), hepatic steatosis and hepatic fibrosis is of great importance. Point-shear-wave elastography (pSWE) and vibration-controlled transient elastography (VCTE) are non-invasive methods for measuring liver stiffness. The degree of liver disease can be reduced by weight reduction after bariatric surgery. The extent to which this is possible will be investigated in this clinical trial.

Objectives

This trial aims to determine the most effective surgical method for patients with obesity and liver disease. Moreover, the performance of the ACUSON Sequoia® ultrasound system and Fibroscan® in patients with severe obesity will be examined.

Methods

Measurement of liver stiffness of patients, who are undergoing bariatric surgery at our center, by pSWE and VCTE within the days of surgery and at the first postoperative follow-up. The perioperative grade of liver disease (NAFLD/NASH, steatosis S0-S3, fibrosis/cirrhosis F0-F4) was diagnosed by intraoperative liver biopsy as reference standard.

Results

Currently (March 2023), preoperative results from 93 patients and postoperative data from 55 patients are available. Preoperatively, mean BMI was 46.3 kg/m² (33-74.1), liver stiffness was 8.9 kPa (2-46) and liver fat content was 318 dB/M (116-400). At the time of follow-up, a mean of 4.1 months postoperatively, BMI was 35.9 kg/m² (24.4-39). At this time, liver stiffness and liver fat content had decreased by an average of 3.5 kPa and 54 dB/M, 2.4 kPa and 54 dB/M, 4.3 kPa and 56 dB/M, 3.6 kPa and 55 dB/M in patients after Sleeve-Gastrectomy, Omega-Loop-, Roux-en-Y- and SADI-S gastric bypass respectively. The full results will be presented at this years' IFSO World Congress.

Discussion

Obesity is a disease associated with a large number of comorbidities. The goal of bariatric surgery is not only to improve the quality of life through weight loss, but also to reduce comorbidities. Using the ACUSON Sequoia® ultrasound system and the FibroScan®, monitoring of improvement in liver health is possible. The results of this study may help to determine the best bariatric surgery method for patients with pre-existing liver disease and thus treat affected patients in the future in form of precision medicine.

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EVALUATION OF GASTRIC EMPTYING USING NUCLEAR SCINTIGRAPHY COMPARED TO 3D-MDCT GASTRIC VOLUMETRY IN THE ASSESSMENT OF POOR WEIGHT-LOSS FOLLOWING SLEEVE GASTRECTOMY

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Background

Poor weight loss and weight regain are principal challenges following laparoscopic sleeve gastrectomy (LSG). There is a lack of standardized assessments and diagnostic tests to stratify the status post-LSG and determine whether a genuine anatomical or physiological problem exists.

Objective

We aimed to compare nuclear scintigraphy gastric emptying with CT volumetric analysis of sleeve anatomy and determine the impact of anatomy on physiological function and its correlation with weight loss.

Methods

Patients greater than 12 months post-LSG, were categorised into optimal sleeves (n=29) and poor weight loss (PWL) (n=50). All patients undertook a protocolised nuclear scintigraphy and Three-Dimensional Multi-detector Computed Tomography (3D-MDCT) Gastric Volumetry imaging.

Results

Post-operative % total weight loss in optimal sleeves was $26.2 \pm 10.5\%$ vs $14.2 \pm 10.7\%$ in the PWL group (p-value <0.0001). The PWL group had significantly more delayed gastric emptying half-time than optimal sleeves (34.1 ± 18.8 vs 19.5 ± 4.7 , p-value <0.0001). Both positive and negative correlations were observed between gastric emptying half-time and weight loss parameters (BMI; $r= 0.215$, p-value 0.048, %EWL; $r= -0.336$, p-value 0.002 and %TWL; $r= -0.379$, p-value <0.001). The median gastric volume did not differ between the optimal sleeves (246 (IQR 50) ml), and PWL group (262 (IQR 129.5) ml), p-value 0.515. Nuclear scintigraphy gastric emptying half-time was the most highly discriminant measure. A threshold of 21.2 minutes distinguished optimal weight loss from PWL patients with 86.4% sensitivity and 68.4% specificity.

Conclusion

This study has demonstrated nuclear scintigraphy is a potentially highly accurate tool in the functional assessment of sleeve gastrectomy physiology. It appears to perform better as a diagnostic test than volumetric assessment. We have established diagnostic criteria of greater than 21 minutes to assess sleeve failure, which is linked to suboptimal weight loss outcomes.

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EVALUATION OF WEIGHT LOSS AFTER SINGLE ANASTOMOSIS SLEEVE ILEAL BAPASS (SASI) AND ONE-ANASTOMOSIS GASTRIC BYPASS (OAGB): A COMPARATIVE STUDY

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Introduction

Sleeve Gastrectomy and RYGB are actually the most frequently performed bariatric procedures world-wide. OAGB is increasing in numbers, SASI bypass is a recently developed procedure, hoping with her to avoid the negative changes happening after the above mentioned procedures. It is a malabsorptive procedure. One year follow up results obtained in terms of weight loss and the effect on comorbidities were compared between SASI and OAGB patients.

Patients and Methods

We collected our data prospectively from our clinic and formed two groups (Gr) of patients, Gr A: SASI, Gr B: OAGB (no randomization). Analyzed variables were baseline and post-operative BMI, excess weight loss (EWL), pre and post-operative comorbidities up to 1 year.

Results

Gr A: between 2019-2022. we have performed 102 SASI operations. 96 (94%) patients available for follow up. Gr B: included 120 OAGB patients, 112 (93%) available for follow up. There were no significant differences in age, gender, comorbidities or anthropometric measurements preoperatively between both groups. follow up of 1 year. We observed mild not significant differences in EWL in favor for OAGB, Diarrhea, and post prandial abdominal pain less frequent, stool odor less bad in SASI Group. BMI post SASI decreased from 41 kg/m² to 29 Kg/m², Post OAGB from 40 kg/m² to 28 Kg/m²), with EWL of 83%, and 86% respectively. Diabetes Mellitus type II (DM II), Hyperlipidaemia resolved in similar percentage in both groups. Iron deficiency anaemia and hypoalbuminaemia incidence were higher in Gr B.

Conclusions

SASI Bypass achieve superior results in terms of quality of life and comorbidity and results with significant and comparable EWL to OAGB.

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EVOLUTION OF TECHNICAL COMPONENTS IN ROUX-EN-Y GASTRIC BYPASS: ANALYSIS OF THE UNITED KINGDOM NATIONAL BARIATRIC SURGERY REGISTRY

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Introduction

Roux-en-y gastric bypass (RYGB) is a complex surgical intervention used for severe and complex obesity. However, little is known about how these procedures are performed in routine care. This study aims to investigate the delivery of RYGB technical components in the United Kingdom National Bariatric Surgery Registry (NBSR).

Methods

This study analyzed RYGB procedures conducted between 2009 and 2019 in the NBSR. Technical factors, including anastomotic formation, Roux limb routing, mesenteric defect closure, and limb lengths (Roux: <100cm/101-150cm/150cm+ & biliopancreatic: <50cm/51-100cm/100cm+) were extracted. Limb length analyses were conducted according to preoperative BMI (<50kg/m² and 50+kg/m²). Chi-square analysis was used to assess proportional changes over time.

Results

The study included 34,629 primary RYGB procedures. The formation of gastrojejunal anastomosis evolved from mixed in 2009 (Linear-stapled (38.9%;1072/2702), Circular-stapled (27.2%;736/2702), Hand-sewn (33.8%;914/2702) to predominantly linear-stapled in 2019. Jejunojunal anastomotic construction evolved into two consistent variations in single-linear-stapled (57.8%;1537/2661) and triple-linear-stapled (36.3%;967/2661) in 2019 (p<0.001). Antecolic (approximately 80%) and retrocolic (approximately 20%) Roux limb routing remained stable over the study. Mesenteric defect closure significantly increased over the study period from 68.6% (1631/2331) in 2009 to 96.1% (2581/2687) in 2019 (p<0.001). For BMI <50kg/m², biliopancreatic limb length changed from mixed (51-100cm:49.6%;636/1282 & ≤50cm:43.4%;557/1282) to mostly 51-100cm length (71.4%;1269/1778) (p<0.001), while two stable Roux limb length variations were noted (≤100cm:52%(9824/18882) and 101-150cm:46.3%(8734/18882)). For BMI 50+kg/m², biliopancreatic limb length changed from mixed (51-100cm:53.2%;523/983 & ≤50cm:35.7%;351/983) to mostly 51-100cm length (69.4%;565/814) (p<0.001), whereas two stable Roux limb length variations were noted (101-150cm:60.4%;(6885/11403) & ≤100cm:35.9%(4096/11403)).

Conclusion

Technical components of anastomosis, defect closure, and limb lengths have evolved in the NBSR, which has implications for quality assurance and the translation of evidence into clinical practice.

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EXAMINING THE CLINICAL OUTCOMES OF SLEEVE GASTRECTOMY IN A SINGLE-CENTER: A RETROSPECTIVE ANALYSIS

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Background

Sleeve gastrectomy is a commonly performed weight loss surgery that has shown promising results in terms of weight loss and improvement in comorbidities such as type 2 diabetes and hypertension. However, there is a lack of consensus on the optimal technique for sleeve gastrectomy and limited research on the long-term outcomes of this procedure.

Objective

The objective of this study is to examine the clinical outcomes of sleeve gastrectomy in a single-center cohort and identify potential predictors of success.

Methods

This is a retrospective analysis of patients who underwent sleeve gastrectomy at a single center between May 2015 and December 2022. Data on patient demographics, surgical technique, postoperative weight loss, comorbidities, and complications were collected and analyzed. Predictors of success, defined as achieving at least 50% excess weight loss, were also evaluated.

Results

A total of 200 patients who underwent sleeve gastrectomy were included in the study, with a mean follow-up of 24 months. The mean age was 36 years, and the majority of patients were female (78.6%). The mean preoperative BMI was 44.6 kg/m², and the mean excess weight was 63.3 kg. The mean excess weight loss at 1 year, 2 years, and 3 years postoperatively was 61.3%, 65.1%, and 66.8%, respectively. The majority of patients experienced improvement or resolution of comorbidities such as hypertension (83.2%) and type 2 diabetes (75.5%). The overall complication rate was 5.5%, with no major complications reported. Predictors of success included younger age, female sex, and preoperative BMI less than 50 kg/m².

Conclusion

Sleeve gastrectomy is an effective weight loss procedure with excellent long-term outcomes and a low complication rate in this single-center cohort. The procedure resulted in significant weight loss and improvement in comorbidities such as hypertension and type 2 diabetes. Younger age, female sex, and preoperative BMI less than 50 kg/m² were identified as potential predictors of success. These findings can help guide patient selection and optimize outcomes for sleeve gastrectomy.

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EXCESSIVE WEIGHT LOSS AFTER BARIATRIC METABOLIC SURGERY IS NOT AN UNCOMMON INCIDENCE AND CONSEQUENCE AT A SINGLE MEDICAL CENTER

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Background

Weight loss of 50-75% of excess weight is desirable after bariatric & metabolic surgery. Some patients lose >85% (excessive weight loss) of the excess weight, unrelated to complications which may necessitate medical &/or surgical intervention. A retrospective study determined the incidence and consequences of excessive weight loss at our centre.

Method

A review of a prospectively maintained database of patients who had bariatric & metabolic surgery at our institution was done. Patients who lost >85% EBWL at any time after the initial operation were identified. Data was collected on these patients and analysed. Patients losing >85% EBWL due to complications or secondary operations were excluded.

Results

The database identified ten thousand hundred & eighty-eight patients. Three hundred and thirty patients had lost >85% EBWL at some stage post-operation. 96 (17.17%) had undergone an OAGB, 69 (12.12%) a BGP and 80 (9.79%) a BSG. 112/330 (33.9%) had a BMI <40 kg/m² before surgery. Most patients regained weight to <85% EBWL, but 35 (10.6%) patients had persistent weight loss >85% EBWL. 3(3.19%) OAGB and 21(26.25%) BSG had >85% persistent %EBWL. Ten patients with OAGB had revision/reversal due to complications from excessive weight loss, and three in the BSG group had band removal.

Conclusion

Excessive weight loss is not uncommon after bariatric metabolic surgery. In most patients, this loss is transient, but in a few, particularly after OAGB & BSG, it is associated with severe nutrient & protein deficiency.

Keywords: Excessive weight loss, Bariatric metabolic surgery.

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EXPERIENCE IN BARI-PLASTIC PROCEDURES AS A BARIATRIC SURGEON

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Background

Loosened skin following drastic weight loss is one of the possible outcomes following bariatric surgery. Therefore, we can be certain of multiple post-bariatric patients needing Bariplastic surgery in the future.

Objectives

To share our experience as a bariatric and abdominal reconstruction surgeon dealing with post-bariatric patient needing Bariplastic procedure.

Methods

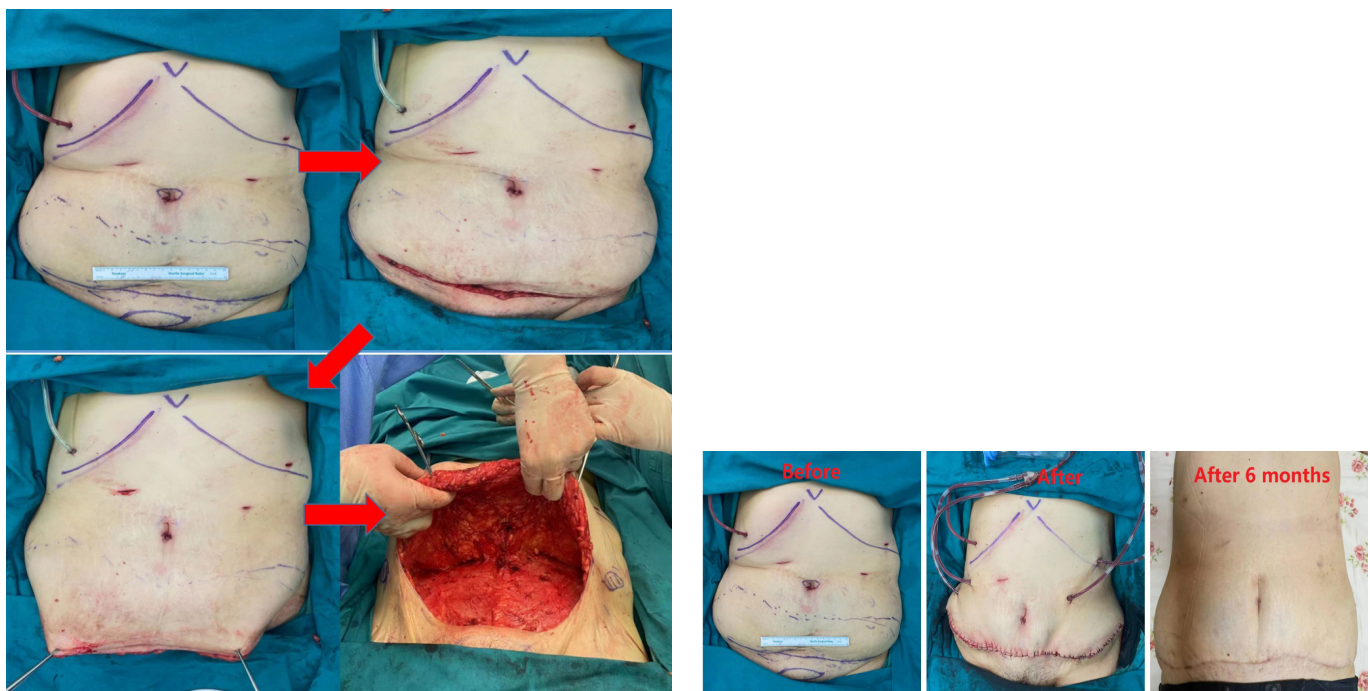
This is a female patient, with weight 80 kg, height 1.69 m, BMI 31 kg/m², diagnosed with type-2 diabetes mellitus pre-bariatric surgery. The patient then chose to undergo Roux-en-Y gastric bypass (RYGB) procedure. 3 years post-RYGB, her weight was stable at 60 kg (BMI 23 kg/m²), and her blood glucose was controlled without the need for anti-diabetic medications. 3 years post-RYGB, the patient complained regarding her loosened skin and demand to perform abdominal reconstruction procedure to tighten her skin. Following additional test, we found that there was a dilated fundus which the patient demanded to be re-resect.

Results

Firstly, the dilated fundus was resected laparoscopically. The procedure went well without the need to convert. We then follow with abdominal reconstruction procedure as shown in the picture below.

Conclusions

Bariplastic is not performed by most bariatric surgeons in China. Surgeon having experience in abdominal reconstruction surgeries will have extra advantages when dealing with Bariplastic procedure. It is crucial to understand the degree of skin tightening that the patient demand, as too tight of skin increases the risk for complications.



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EXPLORING THE BURDEN OF OBESITY IN A MULTI-ETHNIC POPULATION: DOES HEALTH LITERACY MATTER?

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Background

Since 2006, obesity is the top 5 risk factors for leading causes of death globally, and had contributed to about 19,000 deaths in 2019 in Malaysia (Institute for Health Metrics and Evaluation, 2019). There were 50.1% Malaysians with obesity or overweight in 2019 (Institute of Public Health, 2019), and the Global Obesity Observatory predicted at least another 1.7 fold increase by 2025 (World Obesity Federation, 2019). To halt the progression, innovative solutions are crucial to cater for multi-ethnic communities in Malaysia.

Objective

This study correlates health literacy with obesity prevalence among Malaysians in relation to social health determinants to determine its impact.

Methods

Data on obesity prevalence and health literacy were derived from the National Health and Morbidity Survey 2019 technical report, which had 9811 Malaysian respondents. The prevalence of obesity among Malaysians aged 18 years and above is compared with their score for health literacy using sociodemographic characteristics like age, gender, ethnicity, location, education level, occupation, marital status and household income. Obesity is defined using World Health Organisation 1998 classification which is body mass index (BMI) equal to or more than 30kg/m², while health literacy is divided into three levels: limited, sufficient, and excellent.

Results

40.7% Malaysians had sufficient health literacy, with 24.3% scoring excellent. But, 30.4% had overweight problems while 19.7% had obesity issues. High prevalence of obesity (19.8%) in the rural area population corresponds to limited health literacy (41.5%). However, although health literacy levels were excellent among Indians (33.1%), married (25.8%), M40 income groups (27.3%) and females (24.4%), prevalence of obesity in these populations was also the highest at 29.3%, 21.2%, 21.5% and 24.7% respectively. Most Malaysians with no formal education and ages above 65 had limited health literacy, yet, more than 44.2% have normal BMI. Despite 32% of government workers having excellent health literacy, 20.8% still suffered from obesity.

Conclusion

Improving health literacy alone is not enough. Instead, moving forward, we should use a more holistic approach like incorporating behavioral change models (European Food Information Council, 2014) for more success in curbing obesity among Malaysians.

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FACTORS ASSOCIATED WITH COMPLETE REMISSION OF TYPE 2 DIABETES IN PATIENTS OLDER THAN 65 YEARS – A MULTICENTER STUDY

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Background

With the growing number of elderly people suffering from obesity, metabolic surgery is becoming a big concern in the elderly population. It is necessary to look for factors determining remission of obesity-related diseases.

Objectives

The aim of this study was to investigate factors associated with complete remission of type 2 diabetes (T2D) in patients over 65 years.

Methods

A retrospective study analyzed patients over 65 years who underwent laparoscopic bariatric procedures in Poland from 2013 to 2022. The efficacy endpoints was complete remission of T2D and percentage of total weight loss (%TWL). The patients were divided into 2 groups: responders (R), who had complete remission of T2D, and non-responders (NR), who had partial remission, improvement or no changes of T2D.

Results

There were 51 (34.9%) patients in R group and 95 (65.1%) patients in NR group. The patients from both groups did not statistically differ in sex, age, BMI before surgery, weight loss before surgery, type of surgery and operative time. The statistically significant differences were observed in length of hospital stay, duration and type of treatment of T2D, and %TWL ($p=0.015$, $p=0.002$, $p=0.034$, $p=0.014$ respectively). All available factors contributing the complete remission of T2D treatment were analyzed in univariate logistic regression models. Preoperative oral medications and disease duration of less than 5 years are associated with a higher likelihood of complete remission of T2D (OR 1.62, OR 2.24, respectively). TWL% were significantly increasing odds ratio of complete remission of T2D in patients over 65 years ($p=0.005$).

Conclusion

Bariatric and metabolic surgery may led to complete T2D remission in patients over 65 years of age. Shorter duration of T2D and taking only oral medicaments before the surgery are predictors for the complete remission of T2D in patients over 65 years. TWL% increases odds ratio of complete remission of T2D in patients over 65 years.

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FACTORS OF REMISSION OF TYPE 2 DIABETES IN MORBID OBESE PATIENTS AFTER BARIATRIC SURGERY IN KOREA

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Objective

The aim of this study was to investigate the effect of bariatric surgery on the remission rate of type 2 diabetes mellitus (T2DM) and factors affecting it in patients with obesity and T2DM for more than one year after surgery.

Methods

Retrospective analysis was performed on patients who had T2DM or were newly diagnosed in the preoperative evaluation among patients with obesity who underwent bariatric surgery from January 2019 to June 2022 at Kyung Hee University Hospital at Gangdong.

Results

Of the 178 patients who underwent bariatric surgery, 83 patients with T2DM were included in this study. Mean age was 48.2±11.1 year, male sex ratio was 26.5% and mean BMI was 36.6±6.3 kg/m². Three types of bariatric surgeries were performed (24 laparoscopic sleeve gastrectomies (28.9%), 55 laparoscopic Roux-en-Y gastric bypasses (66.3%), and 4 laparoscopic sleeve gastrectomy with duodenojejunal bypasses (4.8%)). Median follow up period of the patients was 14.9 months [range: 4.9-39.7]. Mean BMI was decreased to 28.5±5.1 kg/m² at 1 year after surgery. Percentage total body weight loss was 22.3±6.6% at 1 year after surgery. The remission rates of T2DM (HbA1C<6.5% without medication) were achieved 71.4% at 6 months and 81.0% at 1 year after surgery and the rate was similar among each types of surgeries. Significant improvements at 1 year after surgery were observed in HbA1c (-1.6±1.2 mg/dL), triglycerides (-75.0±82.9 mg/dL), HDL-Cholesterol (+7.2±10.7 mg/dL), systolic blood pressure (-19.9±21.0 mmHg), diastolic blood pressure (-13.3±15.2 mmHg) and insulin resistance (HOMA-IR, -6.1±8.3). The proportion of insulin-using patients was significantly decreased from 18.1% preoperatively to 6.2% at 1 year after surgery (P=0.046). Univariate analysis identified lower ABCD score, higher HbA1c, lower insulinogenic index (IGI), usage of oral anti-diabetic medication, and usage of insulin treatment were significant risk factors of hindering the remission of T2DM at 1 year after surgery. Multivariate analysis confirmed that lower IGI was an independent risk factor of hindering the remission of T2DM at 1 year after surgery (OR 0.440, 95% confidence interval 0.208 – 0.930).

Conclusion

Bariatric surgery can be considered as an effective treatment option for remission of T2DM, and patients with higher preoperative IGI showed better outcomes at 1 year after bariatric surgery.

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FAT SOLUBLE VITAMIN DEFICIENCIES AND TREATMENT FOLLOWING DUODENAL SWITCH

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Background

Duodenal Switch (DS) is a type of bariatric-metabolic surgery that is considered to be one of the most effective in terms of weight loss. However, due to the significant malabsorptive element of this procedure, severe nutritional deficiencies can occur, particularly the fat soluble vitamins including vitamins A, E and K.

Objectives

To determine the prevalence of vitamin A, E and K deficiency within our DS patient cohort and to ascertain the doses of these supplements that patients are taking.

Methods

A retrospective audit was carried out looking at vitamin A, E & K blood results and level of supplementation for all patients who have undergone DS surgery and who are currently receiving follow up with our service.

Results

There are currently 53 patients attending for DS follow up. Forty one (77%) patients are currently taking a vitamin A supplement, indicating that they have been found to have a vitamin A deficiency during monitoring. Of these, 19 remain vitamin A deficient. Doses of vitamin A supplements range from 4000IU to 53,000IU daily. Twenty five (45%) patients are currently taking a vitamin E supplement, indicating that they have been found to have a vitamin E deficiency during monitoring, with 18 remaining deficient despite supplementation. Doses of vitamin E supplements range from 200IU to 1600IU daily. Following an update in UK guidelines in 2020, vitamin K blood tests are now requested as part of nutritional monitoring. To date 27 patients have had a vitamin K blood test. Of these 21 (78%) were found to have a low vitamin K1 and 23 (85%) a raised PIVKA II.

Conclusion

This audit identifies that there is a high prevalence of vitamin A, E and K deficiency amongst our DS patient cohort. These patients often require extremely high doses of supplements, much greater than recommended in the British National Formulary. Despite supplementation, levels are not always maintained within the reference ranges, leaving these patients at risk of the effects of nutritional deficiencies. This highlights the need for long term follow up at specialist centres that have the expertise to manage these nutritional challenges.

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FAT-FREE MASS MEDIATES INCREASED RESTING METABOLIC RATES LONG-TERM AFTER ROUX-EN-Y GASTRIC BYPASS SURGERY

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Background

Acute weight loss following Roux-en-Y gastric bypass (RYGB) surgery results in significant decreases in total resting metabolic rate (RMR) and significant changes in body composition, specifically fat mass and fat free mass (FFM). Although short-term studies have evaluated body weight adjusted RMR (RMR/kg) and body weight adjusted FFM (FFM/kg) in relation to weight loss, long-term studies exploring the relationships between FFM/kg, RMR/kg and sustained weight loss are needed.

Objectives

Assess the relationship between FFM and RMR long-term after RYGB.

Methods

985 participants (357 RYGB, 628 non-surgery comparison) were studied from the Utah Obesity Study (at baseline: 44.8±11.3 years, 82% female, 45.8±7.2 kg/m²). FFM was assessed via bioelectrical impedance and RMR was acquired by indirect calorimetry. Clinical assessments were conducted at baseline (T0) and approximately 2 years (T1), 6 years (T2), and 12 years (T3) afterward. Mixed model analysis was used for comparisons and a mediation analysis to analyze the relationships between surgery groups, FFM/kg, and RMR/kg.

Results

Total weight loss after RYGB was (mean(SE)) 45.7(0.7)kg by T1, 14.9(0.3)kg of which was a loss of FFM. FFM/kg in the surgical group increased from 50.4(0.3)% at T0 to 57.8(0.3)% at T1 and decreased to 53.4(0.4)% at T3 (all p<0.0001). FFM/kg in the non-surgery group decreased from 51.7(0.2)% at T0 to 50.0(0.3)% at T3, with the only decrease between T2 to T3 (p<0.0001). FFM/kg changes from T2 to T3 were not significantly different between the two groups. RMR/kg similarly increased in the surgical group from 16.6(0.2)kcal/kg/day at T0 to 20.6(0.2)kcal/kg/day at T1 and decreasing to 17.1(0.2)kcal/kg/day at T3 (all p<0.0001). RMR/kg in the non-surgery group fell from 17.3(0.1)kcal/kg/day at T0 to 15.8(0.2)kcal/kg/day at T3, with decreases from T1 to T2 and T2 to T3 (all p<0.01). The indirect association between RYGB and RMR through postsurgical FFM was statistically significant ($b=0.171$, $p<0.0001$, 95%CI [0.130,0.223]).

Conclusions

An increase in RMR relative to body mass is mediated by FFM/kg up to 12 years after RYGB surgery. When compared with changes over time in the non-surgical group, a decrease in FFM/kg long-term in the surgery group appears to be consistent with the effects of aging.

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FEASIBILITY OF TRANSORAL OUTLET REDUCTION ENDOSCOPY (TORE) AS REVISIONAL SURGERY AFTER SINGLE ANASTOMOSIS STOMACH-ILEAL BYPASS WITH SLEEVE GASTRECTOMY (SASI-S): TWO CASE REPORTS FROM 2022/2023

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Background

SASI-S is an emerging new operation method for treatment of severe obesity. This method combines restriction with sleeve procedure and malabsorption with transit bipartition where ideally 75% of nutritional contents passes over to the common channel whereas 25% of nutritional contents follow the normal GI tract through pylorus. However, excessive weight loss with malnutrition may develop after this procedure and this may require revisional surgery. Surgical revisional methods for SASI-S can be conversion from SADI-S to sleeve or lengthening of the common channel. Theoretically, reduction of anastomotic size may also be useful for the patients and in our case report we describe our experience with this novel approach.

Objectives

In this case report, we describe two cases from our surgical department where we have performed TORe procedure after SADI-S.

Methods

Patient 1 had gastric bypass surgery in 2008 and due to severe weight regain a secondary procedure was performed with conversion to SADI-S by a two-step procedure in 2021. Patient 2 had SADI-S surgery in the winter 2022. Both patients developed excessive weight loss during 2022. For both cases TORe was performed as revisional procedure for treatment of excess weight loss.

Results

TORe revisional procedure was performed on both patients in 2022 with the goal of reducing the anastomotic size with 50%. In addition, we injected 100 units of Botox into the pyloric region to increase the enteral flow through pylorus. Initially, both patients responded to this procedure with weight stabilization. Concomitant diarrhea for patient number 2 also improved. Unfortunately, 50% anastomotic reduction was not enough to provide a satisfactory long-term outcome for these patients. In addition, one of the patient also had suture slippage. Therefore, we had to repeat the procedure for both patients with anastomotic reduction of 90% with so fare successful outcome.

Conclusion

Our preliminary results indicate that minimal invasive revisional surgery with TORe may be a novel first approach technique to treat excessive weight loss after SASI-S surgery for severe obesity rather than conversion to sleeve.

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FISTULO-JEJUNOSTOMY AS A MANAGEMENT OPTION FOR LEAK FOLLOWING BARIATRIC SURGERY

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Background

Roux-en Y gastric bypass (RYGB) and laparoscopic sleeve gastrectomy (LSG) are the two most commonly performed weight loss procedures in Australia. The published leak rate for RYGB and LSG when performed in high volume centres is roughly 1-2%. Management of leaks is difficult and is associated with significant morbidity and extended hospital stay. Most contemporary initial treatment measures are non-operative but condemn patients to a drawn out process of recovery. Fistulo-jejunostomy has been described as a salvage management option for leaks with excellent long term outcomes. We present outcomes following fistulojejunostomy from a single institution in Australia.

Objectives

Describe outcomes in a small cohort of patients with staple line leak following RYGB or LSG undergoing fistula-jejunostomy.

Methods

This is a retrospective review of patients (referred to and from a single centre of excellence in Sydney Australia) with staple line leak between 2008-2023.

Results

Ten patients underwent laparoscopic fistula-jejunostomy. The patients' mean age was 57.3 +/- 8.3 years and 60% were female. The mean durations of leak for referred patients and in-patients prior to formation of fistula-jejunostomy was 2.4 months and 2.5 weeks respectively. The mean time to intervention for all patients at our centre was 3 weeks. Patients underwent endoscopic procedures (including dilatation, stent placement and internal drainage) prior to their definitive surgery. Postoperatively, 2 out of 10 gastrojejunostomies were intact (only 1 demonstrated partial apical dehiscence managed with a pigtail drain). There were no further surgical revisions. Mean postoperative hospital stay was 12.2 days (range 8-28 days) and follow up endoscopy at 12 months demonstrated complete resolution in 100% of cases.

Conclusion

Fistulo-jejunostomy is a safe management option for chronic gastric fistula secondary to staple line leak. Length of hospital stay is shortened and long term fistula control is excellent.

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FIVE-YEAR OUTCOME OF ADOLESCENT PATIENTS AND CHILDREN WHO UNDERWENT BARIATRIC SURGERY

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Introduction

Bariatric surgery is a well known procedure for managing obesity. The role and outcomes of different bariatric procedures among the pediatric population is still not clear. Several studies reported positive outcomes for it, however; other still doubt it's benefit and safety in this age group. Moreover the youngest age to undergo bariatric surgery is still a matter of debate.

Aim of the study

To study the outcomes of different bariatric procedures five years or more after surgery in the pediatric population (<18 years). All vitamins, minerals, physical and comorbidities outcomes are assessed and reported.

Methods

We reviewed all young patients (<18 years) who underwent bariatric surgery in our unit and who completed five years or more after surgery. A blinded questionnaire was filled by patients and laboratory investigations were done including different minerals, vitamins, lipids and iron studies. In addition, different comorbidities were studied and analyzed in the form of improvement, stationary course or worsening after surgery. The rate of growth was also assessed.

Results

Data showed promising results in the form of improvement of general life style and quality of life of patients. Most comorbidities improved and had a positive impact on patients. There was no significant drop of vitamins, minerals and iron among most patients. The rate of physical growth was not affected in these patients.

Conclusion

Bariatric surgery seems to be a safe and effective procedure in the pediatric age group. Further larger comparative studies are needed to compare its outcomes of different bariatric procedures and to recommend the youngest age group where bariatric surgery can be safely done.

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FIVE-YEAR OUTCOME OF PATIENTS AFTER LAPAROSCOPIC ONE ANASTOMOSIS GASTRIC BYPASS

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Introduction

Bariatric surgery is a well known procedure for managing obesity. One Anastomosis Gastric Bypass (OAGB) is the third most common bariatric procedure after laparoscopic sleeve gastrectomy (LSG) and Roux en Y gastric bypass (RYGB). OAGB has been shown to be effective in weight loss as well as improvement of comorbidities especially diabetes. It also results in a positive outcome concerning the quality of life of patients who undergo this procedure.

Aim of the study

To study the outcomes of OAGB five years or more after surgery. All vitamins, minerals, physical and comorbids outcomes are assessed and reported.

Methods

We reviewed all patients who underwent OAGB in our unit and who completed five years or more after surgery. A blinded questionnaire was filled by patients and laboratory investigations were done including different minerals, vitamins, lipids and iron studies. In addition, different comorbidities were studied and analyzed in the form of improvement, stationary course or worsenening after surgery.

Results

Data showed promising results in the form of improvement of general life style and quality of life of patients. Most comorbidities improved and had a positive impact on patients. There was no significant drop of vitamins, minerals and iron among most patients.

Conclusion

OAGB seems to be a safe and effective procedure. Further larger comparative studies are needed to compare its outcomes with other bariatric procedures.

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FOLLOW-UP, SAFETY, AND SATISFACTION WITH TELE-BARIATRIC FOLLOW-UP IMPLEMENTED DURING THE COVID-19 FRENCH LOCKDOWN: A 2-YEAR FOLLOW-UP STUDY

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Background

The COVID-19 pandemic was initially responsible for a global restricted access to healthcare resources including the follow-up of at-risk populations such as bariatric patients. We substituted face-to-face bariatric follow-up outpatient clinics (FTFC) with teleclinics (TC) during the lockdown.

Objectives

Our aims were to present the patients' outcomes at one and 2 years post-TC implementation and describe patient/practitioner satisfaction.

Material and methods

We retrospectively reviewed data collected on all patients scheduled for TC during the French lockdown period (March 15 to May 15, 2020) (N = 87).

Results

Seven (8%) patients required FTFC, and 80 (92%) underwent TC (study population) for preoperative bariatric assessment (N = 3) and postoperative follow-up (N = 77) after 23.6 ± 29 months following surgery. TC was performed with video and audio (N = 46; 57.5%) or audio alone when video was impossible (N = 34; 42.5%). Sixteen (20%) patients presented at least one complication identified at the first TC and were managed accordingly. There were no readmissions at 30/90 days post-TC. At 1-year after the first TC, overall follow-up rate was 94.9% (TC: 73% vs FTFC: 27%). Patients surveyed on the main advantages of TC over FTFC (N = 46) cited: saving time (97.8%) at a mean 3.9 ± 6.4 h saved per TC, work-advantages (94.3%), and comparable relevance of TC (84.8%). At 2 years post-TC implementation, follow-up rate was 93.5% and satisfaction rate was 80%, with 33% of patients preferring to return to FTFC.

Conclusions

TC is a satisfactory substitute for FTFC, enabling continued bariatric follow-up during and beyond the pandemic setting without compromising patient safety. However, the modest satisfaction outcomes at 2 years highlight a need to discuss follow-up preferences in order to achieve optimal outcomes.

Keywords: Bariatric; COVID-19; Follow-up; Implementation; Sars-CoV2; Teleclinic; Teleconsultations; Telemedicine.

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FOOD ADDICTION IN PATIENTS FROM A BRAZILIAN BARIATRIC SURGERY PROGRAM

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Introduction

The maintenance of excessive eating habits negatively contributes to the maintenance of weight loss in the postoperative period of bariatric surgery. The Yale Food Addiction Scale (YFAS 2.0) is a questionnaire that identifies individuals who are more likely to develop markers of addiction to certain highly processed, high-calorie, and potentially addictive foods. A growing body of evidence suggests that highly processed foods, or ingredients in those foods, may be capable of triggering an addiction process.

Objective

To identify the degree of food addiction and its associations, assessed using the YFAS 2.0, Portuguese version, in patients in the bariatric surgery program of a hospital in southern Brazil.

Method

Patients were contacted via telephone survey, where after consenting to participate in the research, a questionnaire was applied to identify sociodemographic data and the YFAS 2.0, Portuguese version (Obes-BR-YFAS 2.0). The YFAS 2.0 consists of 11 domains, with 35 items and a scale from 0 to 7. Food addiction can be categorized as low, moderate or severe.

Results

The sample consisted of 329 individuals, of which 259 were women (78.7%), aged between 18 and 78 years (mean 46.6 years - SD +13.6), BMI 41.6 (+8.7) kg/m². 53.1% of participants were married and 51.1% had completed high school. The data show that the Brazilian population had an index of 47.1% (n=155) of participants who met the criteria for clinically significant food addiction assigned by the YFAS 2.0. Low food addiction was found in 19 patients (5.7%), moderate in 36 (10.9%) and severe in 100 (30.4%).

Conclusion

Severe food addiction seems to be relevant in this Brazilian population. This is in line with findings in studies carried out in other countries. Appropriate diagnosis and interventions for these patients can bring many benefits in the postoperative period of bariatric surgery.

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FROM WHITE TO BROWN/BEIGE ADIPOSE TISSUE: DO BARIATRIC SURGERIES ENHANCE ADIPOSE TISSUE THERMOGENESIS AND ENERGY EXPENDITURE?

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Background

Bariatric surgery is an effective treatment for obesity causing changes in energy expenditure. Brown adipose tissue (BAT) is an energy-related organ, and the potential effects of bariatric surgery are yet to be investigated. While alterations in gut-brain communication are increasingly implicated in the improved eating behavior, less is known about the mechanistic basis for energy expenditure changes. Brown adipose tissue (BAT) and beige adipose tissue (BeAT) have emerged as major regulators of whole-body energy Expenditure in humans.

Objective

The present review aims to understand the possible effects of BS on the main determinants of adipose tissue thermogenesis and present scientific evidence showing the alteration of cellular adipose tissue energy expenditure indicators after bariatric surgery.

Methods

This review article summarizes studies that were investigating the influence of different type of bariatric surgeries on volume and/or activity of BAT and BeAT thermogenesis. Scopus and PubMed database were consistently searched up to Feb 2023, for animal and human studies providing knowledge relating to the effects of bariatric surgery on adipose tissue related energy expenditure and BAT and BeAT volume and activity.

Results

In this review, we discuss the steadily growing evidence from preclinical and clinical studies suggesting that Roux-en-Y gastric bypass (RYGB) and sleeve gastrectomy (SG), the two most commonly performed bariatric surgeries, enhance BAT/BeAT thermogenesis. The rodent and human studies suggested that RYGB mainly enhances BeAT thermogenesis while SG mainly enhances BAT thermogenesis. RYGB may increase BeAT thermogenesis through a UCP1-independent, PLIN1/2- and UCP2-dependent mechanism involving PLIN1-mediated fatty acid transfer from lipid droplets to UCP2.

Conclusion

Bariatric surgery may increase BAT and BeAT volume and activity, thus improving post-op body energy expenditure. These effects may play a role in the improvement of whole-body insulin sensitivity leading to long-term increased overall metabolic health. Further experiments are essential in order to verify these effects.

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FUNCTIONAL GASTRIC BYPASS: TECHNICAL EVOLUTION AND INDICATION OVER A SPAN OF 20 YEARS

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Background

The pandemic rise of obesity dictated the entrance and diffusion of bariatric surgery as the most effective treatment. The patients, often young and frail, suggest less invasive operations limiting over treatments and complications; their complete reversibility should open the door to emerging behavioral and pharmacological solutions avoiding serious long-term side-effects and decline in Quality of Life.

Objectives

To implement a sequential less invasive surgical treatment without blind intestinal segments, adjustable and reversible, avoiding over treatments. A failure is the best selection to a sequential operation adding reduced energy absorption to the former restriction. Reversibility is key point of every surgical step.

Methods

October '95. I started my laparoscopic bariatric adventure through gastric banding (LAGB). To overcome no compliant patients and failure, in January 2001 I devised a personal technique, the Functional Gastric Bypass (FGB), that encompasses an anastomosis between the gastric banding pouch and a Roux limb. The prerogatives are: 1) no over treatments as sequential treatment, facilitated by the former gastric banding operation; 2) safe, because late activation in absence of gastric section; 3) no-blind segments; 4) adjustability, easy and complete reversibility. To cut down erosion I evolved the perfectly codified operation. After removal of an eroded banding I propose to replace it, as a staged operation, with a strip of different autologous tissues (SGB=Safety Gastric Bypass).

Results

January 2001-January 2023: 299 laparoscopic FGB, 29 as first operation, 270 as sequential; 60% of follow-up at 20 yy; %EWL 60%. Complication: 1 post-operative anastomotic leak. Late complications: 3.5% of erosions. October 2012-January 2023: 53 SGB as revision surgery by means of fascial layer, ligamentum teres, fundoplication, omentum. SGB maintains gastric exploration and reversibility without foreign bodies.

Conclusion

Gastric banding, FGB and SGB perfectly fit the needs of obesity treatment. Sequential treatment, complete reversibility, access to the stomach are in line with an effective, rational strategy.

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FUNCTIONAL LAPAROSCOPIC GASTRIC BYPASS WITH FUNDECTOMY AND GASTRIC REMNANT EXPLORATION (LRYGBFSE): 10-YEAR FOLLOW-UP RESULTS

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Background

The Laparoscopic Roux-en-Y Gastric Bypass (LRYGB) is the gold standard procedure for morbid obesity.

Objective/Introduction

Major limitation of the LRYGB is the challenging exploration of the gastric remnant and duodenum. The functional laparoscopic Roux-en-Y gastric bypass with fundectomy and gastric remnant exploration (LRYGBfse) was introduced in attempt to overcome this limitation. To date, its outcomes are debated and still unclear. The purposes of this study were to describe this novel technique and to analyze outcomes in term of weight loss, perioperative complications, and comorbid resolutions.

Methods

Multicenter prospective study. From January 2009 to December 2018 a series of morbidly obese patients underwent LRYGBfse. Outcomes in term of weight loss, Body Mass Index (BMI) decrease, percentage Excess Weight Loss (%EWL) improvement, and comorbid resolution were analyzed.

Results

Overall, 853 patients were enrolled in the study and prospectively followed. The preoperative mean body weight and mean BMI were 133.4 ± 28.6 kg and 48.2 ± 7.8 kg/m², respectively. No major intra-operative complications were reported. The mean postoperative in-hospital length of stay was 4 days (range 3-10), and the mean ICU length of stay was 1 day (range 1-2). Postoperative overall morbidity and mortality rates were 0.7% and 0%, respectively. Overall, 429, 226, and 84 patients completed the 5, 7 and 10-years follow-up. Mean BMI and %EWL were significantly lower compared to baseline ($p < 0.05$). Comorbid improvement or resolution was recorded in most of the patients. Banding removal was necessary in one patient 62 months after the index operation.

Conclusions

The LRYGBfse seems feasible and effective with durable results at 10-year follow-up. Endoscopic exploration of the gastric remnant with an easy access to the main duodenal papilla are unquestionable advantages.

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GASTRIC CANCER IN THE EXCLUDED STOMACH AFTER ROUX-EN-Y GASTRIC BYPASS: A CASE SERIES

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Introduction

Roux-en-Y bypass (RYGB) is the most commonly bariatric procedure performed. One major post-operative limitation of this procedure is the difficult access to the remnant stomach, often leading to late discovery of gastric lesions and hence delayed treatment. Gastric cancer is the fifth most common cancer in the world and the second cause of death due to cancer. Literature on the occurrence of gastric cancer in the remnant stomach is scarce. We report cases of gastric cancer in the excluded stomach after RYGB with aim to illustrate the difficulty of diagnosis and care of this uncommon condition.

Case series

We present four patients who underwent RYGB ten to twenty years before a gastric cancer diagnosis. Their symptoms of gastric cancer are non-specific and include weight loss, anemia, abdominal pain, and ballooning. In all four cases, an explorative laparoscopy was used as last resort in order to find a diagnosis. Unfortunately, due to the late diagnosis, three of the four patients passed away. All deaths occurred within the first year of diagnosis.

Discussion

Although the incidence of gastric cancer is rare, these cases illustrate the importance of not underestimating the symptoms. Gastric cancer symptoms are vague and often bear resemblance with symptoms linked to the RYGB. Hence when despite a thorough clinical, biological, and radiological examination no diagnosis can explain the patient's symptoms, an exploratory laparoscopy should be discussed with the patient.

Conclusion

Despite gastric cancers in the remnant stomach are singular, surgeons should be aware of its presence when faced to symptoms with no explainable cause. Further investigations are essential in order not to miss an incipient cancer that could be revealed too late.

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GASTRIC GREATER CURVATURE PPLICATION COMBINED WITH NISSEN FUNDOPLICATION IS INFERIOR TO SLEEVE GASTRECTOMY BASED ON PATIENTS AND ANIMAL MODEL

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Background

Gastric greater curvature plication combined with Nissen fundoplication (GGCP+Nissen) was performed before, but its efficacy is still obscure. We matched a cohort patients underwent sleeve gastrectomy (SG) to confirm the effect of GGCP+Nissen on weight loss and other aspects.

Objectives

The aim of this study was to compare weight loss, short-term complications, and improvement of type 2 diabetes of GGCP+Nissen versus SG through a retrospective study and animal experiment.

Methods

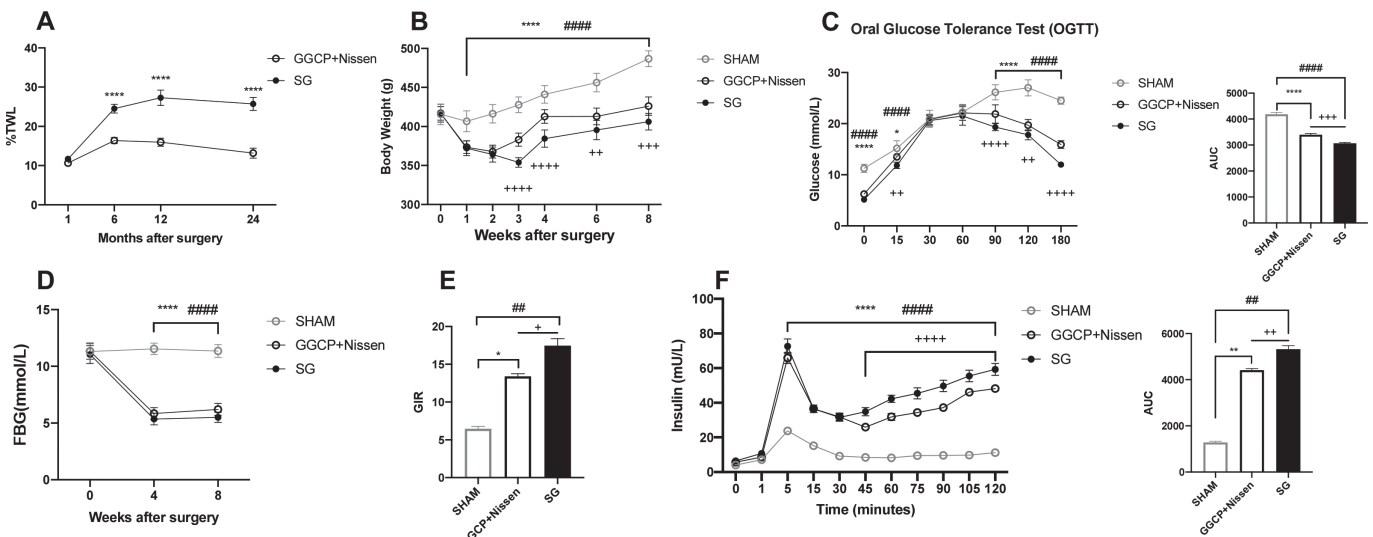
This single center, retrospective review of prospectively collected data was conducted for obese patients with a body mass index around 30 kg/m² that underwent GGCP+Nissen or SG from January 2016 to December 2022. These two groups were compared in terms of demographics, weight loss, and short-term complications. The operation of GGCP+Nissen, SG, and SHAM were performed in Goto-Kakizaki rats, a model of non-obese rats with T2DM, to compare the efficacy of GGCP+Nissen and SG in improving hyperglycemia.

Results

A total of 61 patients were included for this study. 28 patients underwent GGCP+Nissen and 33 SG. These two groups were matched for age, gender, and baseline BMI. Percent total weight loss (%TWL) in GGCP+Nissen and SG group were 16.38±3.69 and 24.51±6.42 at 6 months (P<0.0001), 15.96±5.10 and 27.27±9.13 at 12 months (P<0.0001), 13.2±6.18 and 25.71±8.19 at 24 months (P<0.0001), respectively (Figure A). Four patients in GGCP+Nissen group have gastroesophageal reflux disease (GERD) before surgery, and all of them were complete remission and had no GERD in GGCP+Nissen group after operation. However, there were five patients get GERD after SG, although no GERD in SG group before operation. In short-term complications, one patient in GGCP+Nissen group were readmitted within 60 days postoperatively. In animal experiment, both GGCP+Nissen and SG induced significantly weight loss and improvement of glucose tolerance including increasing insulin sensitivity and secretion of insulin. However, both in weight loss and improvement of glucose tolerance, SG group was better than GGCP+Nissen group in Goto-Kakizaki rats (Figure B-F).

Conclusion

GGCP+Nissen was inferior to SG both in weight loss and improvement of glucose tolerance, although GGCP+Nissen could lead a substantial weight loss and improve GERD efficiently.



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GASTRIC PERFORATION FOLLOWING INTRAGASTRIC BALLOON INSERTION: COMBINED ENDOSCOPIC AND LAPAROSCOPIC APPROACH FOR MANAGEMENT: CASE SERIES AND REVIEW OF LITERATURE

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Background

Obesity is a serious disease, with substantial morbidity and mortality. The endoscopic placement of an intragastric balloon (IGB) in association with a low-calorie diet is an option for the treatment of obesity. IGB complications include dislocation of the balloon causing intestinal obstruction, upper gastro-intestinal bleeding and perforation, especially during balloon insertion or removal. Our work aims at decreasing the morbidity of open laparotomy in the management of such gastric perforations.

Objective

To raise awareness about this possible complication of gastric perforation following IGB insertion and describe a minimally invasive approach of management.

Methods

We report three cases of gastric perforation following IGB insertion that needed surgical intervention. Decision was made to treat them with a minimally invasive combined endoscopic and laparoscopic approach to decrease postoperative morbidity.

Results

All patients were successfully treated by a minimally invasive approach with less morbidity than the conventional open laparotomy.

Conclusion

Gastric perforation should be suspected in any patient with IGB who presents with an acute abdomen. This can be managed with a minimal invasive approach.

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GASTRIC PERFORATION WITH PURULENT PERITONITIS AFTER ENDOSCOPIC INTRA-GASTRIC INJECTION OF BOTULINUM TOXIN A FOR OBESITY TREATMENT

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Background

In order to face the current global obesity epidemic while avoiding the complications and long-term issues related to bariatric surgery, an increasing interest emerged in the use of endoscopic procedures to lose weight. Among them, the endoscopic intra-gastric botulinum toxin A injection is based on the inhibitory effect on the gastric smooth muscles, which leads theoretically to a delayed gastric emptying and an increased satiety. Nonetheless, the effect is transient and current evidence is very poor to support this technique as effective method for sustained weight loss in people with obesity.

Objectives

To discuss a life-threatening complication of a supposed harmless endoscopic procedure to treat obesity.

Methods

We report a case of gastric perforation with a purulent peritonitis after endoscopic intra-gastric injection of botulinum toxin.

Results

A 49-year-old female patient presented on the emergency department with a 24-hour history of rapid onset abdominal pain with very high fever. Two days before, the patient underwent in Turkey an endoscopic intra-gastric injection of botulinum toxin to treat severe obesity (BMI 41.5 kg/m²). Clinically, the patient presented with an acute abdomen with tenderness and peritonism. Laboratory findings showed a leucocytosis (22.1 G/L) and an elevated C-reactive protein (301 mg/L). The computed tomography of the abdomen revealed a pneumoperitoneum and an important inflammatory thickening of the gastric wall, predominant at the antrum. An urgent diagnostic laparoscopy was performed and confirmed a fibrinopurulent peritonitis of the upper abdomen with severe inflammation of the antrum. An obvious perforation site could not be identified at the stomach, even after performing a methylene blue test. A lavage of the abdominal cavity was performed and 2 drainages were placed. After surgery, the patient received a high-dose proton pump-inhibitor therapy and an antimicrobial therapy including piperacillin/tazobactam and fluconazole. The postoperative course was uneventful and the patient could be discharged home after 6 days.

Conclusion

Due to current lack of consistent evidence regarding the effectiveness and rational use of endoscopic intra-gastric injection of botulinum toxin A, and because of potentially severe complication, this procedure should not be offered to patients to treat obesity outside of studies.



Figure 1.

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GASTRIC REMNANT NISSEN FUNDOPLICATION IN OAGB PATIENTS FOR REFLUX TREATMENT

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Introduction

Biliary reflux is the most debatable subject in One Anastomosis Gastric Bypass(OAGB). In spite of demonstration of non statistical implication of Reflux in esophageal, or gastric pouch cancer, surgeons still debate the use of a single anastomosis of small bowel to gastric pouch. We decided to use the gastric remanent, to create a Nissen wrap (NW) around Gastro Esophageal(GE) area to reduce the incidence of Gastro Esophageal Biliari Reflux(GEBR) in patients submitted to OAGB procedure

Objectives

The aim of this study is to compare the results of evidence of Biliary Reflux in esophagus, in patients with OAGB vrs OAGB plus Gastro Esophageal Nissen Wrap(GENW)

Methods

OAGB was performed in 40 patients, based on Carbajo technique. Pouch length 15-18cm. 36fr bougie. 3cm from pylorus in lesser curvature. Total bowel length measured. Bilio Pancreatic (BP) limb length was variable in every case with a Main BP length of 3.4mts. Main Common Chanel length 4.1 mts. Closure of Hiatal defect if present. Nissen 360 wrap of Gastric remanent fundus was created over GE area and fixated in 20 patients and 20 patients where left without the NW.. Endoscopy was performed to all patients one year after procedure.

Results

One year after procedure, patients where divided in 4 goups. OAGB with symptoms 7.5%(n=3) OAGB without symptoms 40%(n=16), OABG+NW with symptoms 2.5%(n=1) OAGB without symptoms 47.5(n=19). Los Angeles classification in all patients with symptoms, class B 10%(n=4) No Esophagitis 90% (n=36)

Conclusion

Nissen Wrap in OAGB was effective to maintain less symptoms of esophageal reflux and esophagitis. No estadistical difference with OAGB withouw NW. There is need of more studies or RCT to stablish long term safety reflux control with a Nissen type wrap in OAGB patients.

P-158

GASTRIC REMNANT PERFORATION CAUSED BY PETERSON'S HERNIA FOLLOWING ONE ANASTOMOSIS GASTRIC BYPASS: A RARE COMPLICATION

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Introduction

One anastomosis gastric bypass (OAGB) has gained popularity over the recent years; it appears to be an effective bariatric procedure with acceptable weight loss, co-morbidity resolution, and complication rates in the short and medium term. However, it still continues to have concerns in the bariatric community due to a spectrum of potential complications. To our knowledge, there are few published cases of internal hernia, but no published reports of gastric remnant perforation following OAGB.

Methods

We report a case of a 32-year-old female who developed a perforation of the remnant stomach along the gastric fundus secondary to bowel obstruction 5 years after OAGB.

Results and Discussion

The perforation was managed by stapled resection of the perforated fundus and closure of Peterson's space for potential hernia as a causative factor, and the patient had a smooth postoperative recovery. Early diagnosis is crucial in post bariatric emergencies with a low threshold of early intervention. Gastric remnant perforation was previously described in some reports following Roux-en-Y gastric bypass (RYGB) but not after OAGB. Etiology of perforation can be rationalized to primary gastric remnant pathology or secondary to external factors such as back pressure of mechanical/functional bowel obstruction.

Conclusion

Peterson's hernia and gastric remnant perforation are rare, yet serious, complications that need to be kept in mind while dealing with post-OAGB patients presenting with abdominal pain. Early diagnosis and treatment are essential for a better outcome.

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GASTRIC SLEEVE EXPERIENCE WITH REDUCED PORT IN MEDICAL TOURISM PATIENTS

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Background

Each year, bariatric surgery becomes a more popular treatment for obesity and type 2 diabetes mellitus (DM2), worldwide the number of surgeries performed has increased from 220,000 per year in 2008-2009 to 833,000 in the 2019. In Mexico, bariatric surgery is very popular. The most performed bariatric procedure is the gastric sleeve, which can be performed using different techniques. Its performance through a previous scar (umbilicus) has shown interest in the surgical community since the incision remains almost covered. Objective: To report the experience of reduced port sleeve gastrectomy in medical tourism.

Methods

Thirty five cases of patients who underwent surgery for bariatric surgery at the bariatric surgery center of CiBariatric Tijuana B.C., Mexico, during the period August 2021- February 2023, were reviewed.

Results

Of the 35 cases, 8.6% were men and 91.4% women, the age range presented a minimum of 19 years and a maximum of 52 years, observing an average of 35.9 years. The weight of the patients prior to surgery presented a minimum of 78 kg and a maximum of 122 kg, with a mean of 93.7 kg. The average Body Mass Index (BMI) prior to surgery was 35.33, most of the patients (57%) were in grade I obesity. The percentage of excess weight was 57% on average. Surgery time was 63 minutes on average. In 100% of the cases, a purple tristaple stapler was used, and in 26% of the cases it was reinforced with a continuous monofilament suture. In 74% it was not reinforced with suture. No transoperative complications were observed, 2 postoperative complications characterized by bleeding and wound dehiscence were observed.

Conclusions

With the new inclusion criteria for obesity surgery (BMI above 30), it makes reduced port surgery attractive to patients, without showing inferiority to conventional laparoscopic bariatric surgery.

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GASTRIC TORSION AND STENOSIS AFTER VERTICAL GASTRECTOMY – REVISIONAL BARIATRIC SURGERY: CASE REPORT

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Background

The revision operation is rarely necessary, but when indicated, it presents increased morbidity. They can be classified into revisions, conversions and reversals. Revision procedures (common channel lengthening) and conversion techniques are mainly associated with malabsorption, as in cases of BPD, BPD with duodenal switch and distal gastric bypass converted to conventional gastric bypass, techniques widely used to maintain the metabolic component preventing relapse of obesity.

Goal

To report a case of gastric torsion and stenosis after sleeve gastrectomy with revisional bariatric surgery, associated with a discussion of the literature on the subject.

Methods

Descriptive case report study at Hospital Carvalho Beltrão – Bariatric Surgery service – which aims to describe a clinical case with comparative analysis of the literature on this topic. For this, in addition to the narrative detailing from the diagnosis to the treatment of the patient, a literature review was carried out from March 2022 to June 2022, using the MEDLINE (via PubMed) and SciELO databases to prepare a review of literature presented with the introduction.

Conclusion

The patient remained hospitalized for two days, evolving satisfactorily well in the postoperative period, with no intercurrents and being asymptomatic, she was discharged on the 2nd POD and with complete regression of the clinical picture at hospital discharge. Today, he has satisfactory weight loss after revision surgery, with a body mass index before surgery of 38.76, decreasing to 26.89 over the course of 3 months.

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GASTRO CUTANEOUS FISTULA OF NATIVE STOMACH AS A BARIATRIC SURGERY COMPLICATION

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A gastrocutaneous fistula is a rare and difficult complication to treat that occurs in 0.5% to 3.9% of patients who receive gastric surgery and also it constitutes up to 25% to 50% of gastrointestinal fistulas. In these patients, there is an increased risk of skin injury, the possibility of infection, dehydration, electrolyte disturbances and the need for frequent bandages and/or stoma bags that significantly interfere in the quality of life. Spontaneous closure is infrequent (6% of cases) and the mortality rate can reach up to 35%, being sepsis the most frequent cause.

Method

A case of a 42-year-old female patient with a history of bariatric conversion surgery (gastric sleeve to Roux-en-Y gastric bypass) who presented leakage of the staple line in the gastric pouch, she received multidisciplinary treatment, that goes from endoscopic drains (Pigtails), endoscopic vacuum therapy (ENDOVAC) and nutritional support with parenteral nutrition plus the confection of supplementary feeding gastrostomy in native stomach (excluded). Integral treatment was accomplished with the control of the gastric pouch leak, however, the formation of a high output fistulous tract caused by the nutritional gastrostomy tube from the native stomach to the abdominal wall appeared. Conservative management with nutritional and pharmacological support was decided, which made the progression to a low-output fistula. Due to its persistence for about a year and the discomfort that it entails for the patient, laparoscopic revision surgery was decided to define a behavior.

Result

Through laparoscopic revision surgery, it was decided to make a resection of the gastrocutaneous fistulous tract, stapling partially the native stomach to close the fistulous orifice. A trans-surgical endoscopy was performed, showing no evidence of leak of the gastric pouch or the gastrojejunal anastomosis.

Conclusion

Gastrocutaneous fistulas after bariatric surgery are difficult to manage and there is no standard treatment for them. The management must be individualized for each patient. Based on the case and the evidence found, we can conclude that multidisciplinary treatment, both endoscopic and laparoscopic, must be considered and implemented together for an effective result.

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GASTROEPIPLOIC ARTERIOVENOUS LIGATION FOR THE PREVENTION OF POSTOPERATIVE BLEEDING AFTER SLEEVE GASTRECTOMY

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Background

Laparoscopic sleeve gastrectomy (LSG) for morbid obesity in Japan has been safely introduced with extremely low surgery-related mortality (0.03%, 1/2865 cases). However, post-operative bleeding requiring reoperation reported 0.7% (21/2865 cases). Postoperative bleeding from the omentum usually caused by an insufficient coagulation of stomach branch of the gastroepiploic artery and vein (GEAV), and difficult to be recognized during surgery. In our institution, we experienced reoperation due to postoperative bleeding in the early phase of LSG introduction. Therefore, we attempt to ligate the GEAV to reduce the blood flow to prevent the postoperative hemorrhage from the branch of GEAV.

Aim of the study

To evaluate the effectiveness of the surgical technique “gastroepiploic arteriovenous ligation” for the prevention of postoperative hemorrhage during laparoscopic sleeve gastrectomy.

Material and Methods

Clinical data of the patients who underwent LSG in Kitasato University Hospital, between August 2021 and March 2023, were retrospectively reviewed. Right GEAV ligation was attempted with a clip applier at the site of right edge of omental dissection. Left GEAV was also ligated for the first two cases after attempted the GEAV ligation, but it was abolished thereafter. Post operative hemorrhage and other adverse event were analyzed and compared between first 4 cases without GEAV ligation (No Ligation: NL group) and cases with GEAV ligation (Ligation: L group).

Results

Between 2021 and 2023, 11 LSG procedures were performed in our center: 4 cases being distributed to NL group while the remaining 7 cases to L group. No significant differences were found between the NL and L group in terms of median age (42 vs 47 y.o), preop-BMI (44.3 vs 45.0 kg/m²), operative time (149 vs 173 min), blood loss (55 vs 12 ml), and postoperative hospital stay (8.5 vs 8.6 days). Two patients of NL group developed early postoperative hemorrhage requiring hemostasis, while no patients in L group complicated with postop hemorrhage. No adverse events regarding the omental ischemia have been recognized.

Conclusions

The surgical technique “gastroepiploic arteriovenous ligation” in laparoscopic sleeve gastrectomy may have a benefit for prevention of postoperative bleeding.

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GASTROGASTRIC FISTULA POST GASTRIC BYPASS

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Background

Gastrogastric fistula (GGF) is a complication that may arise after gastric bypass that consists of an abnormal communication between the gastric remnant and the pouch.

Objectives

To further understand and gain extensive knowledge regarding physiopathology and current treatment of GGF.

Methods

A clinical case is presented of a 41-year-old woman who goes to the Emergency Room with a postoperative temperature of 38°C, following a gastric bypass the previous week without incident. The patient had elevation of acute phase reactants; a tomography computerized scan (CT) was carried out which showed a liquid collection with sharp edges 46x38x44mm adjacent to the intestinal anastomosis between the gastric remnant and the medial pouch wall (Fig. 1). It was decided that she should be admitted to hospital, given conservative treatment with diet support, proton pump inhibitors (PPIs), and amoxicillin-clavulanic antibiotic. One week later in a CT with oral contrast, passage of contrast to the gastric remnant with no intraperitoneal contrast leakage was detected, suggesting the appearance of a GGF (Fig. 2). Given the absence of leakage to the abdominal cavity, the asymptomatic condition of the patient, her tolerance of a liquid diet and with normal analysis, it was decided that the patient should be discharged.

Results

The patient was monitored in outpatient consultation and progressed favourably. An abdominal CT two months later, showed a decrease in the collection and absence of oral contrast in the remaining stomach, allowing her to expand her diet. Finally, her condition was seen to be resolved in an abdominal CT carried out six months later.

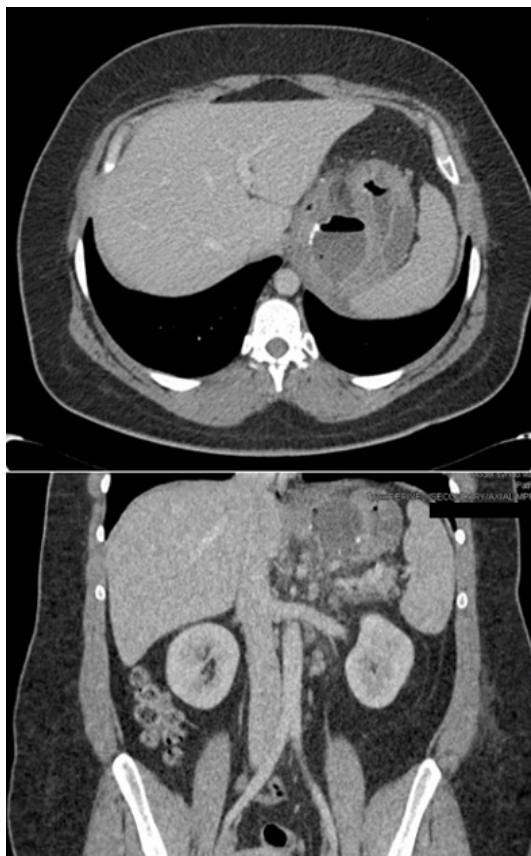


Fig. 1.

Conclusion

GGF is a complication which can arise in the long term after undergoing a gastric bypass. It usually occurs in the context of weight regain or in gastric ulcers. In the etiopathogenesis of the GGF, anastomotic dehiscence with the subsequent collection which communicates with the gastric remnant, as in the case we have studied here, must be considered. Although it is true to say that it normally requires surgical intervention, in some cases, it can be treated in a conservative manner with PPIs, alcohol, non steroidal antiinflammatory drugs, tobacco abstinence, and with adequate weight control.

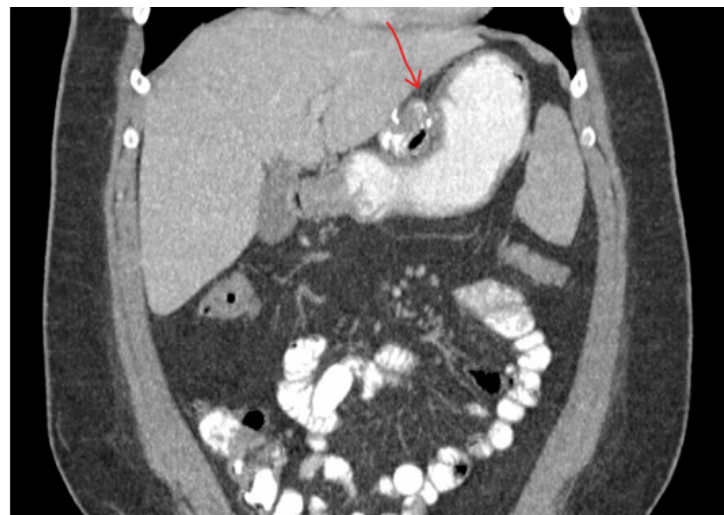


Fig. 2.

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GASTROINTESTINAL REPORTED SYMPTOMS FOLLOWING ONE ANASTOMOSIS GASTRIC BYPASS

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Objectives

To describe gastrointestinal-reported symptoms following One Anastomosis Gastric Bypass (OAGB).

Methods

A study among patients who have undergone OAGB at Assuta Medical Centers and were recruited from patient lists based on time elapsed since surgery was performed. An online survey with information on demographics, anthropometrics, medical conditions, and gastrointestinal outcomes was administered.

Results

A total of n=277 respondents with pre-surgery age and BMI of 41.6±11.0 years and 41.2±4.8 kg/m², of them, 75.8% females were included. Respondents presented mean excess weight loss of 51.0±19.9, 89.0±22.0, and 89.9±23.6 (P<0.001), at 1-6 months, 6-12 months, and 1-5 years post-surgery, respectively. Median Gastrointestinal Symptom Rating Scale score was similar between time elapsed since surgery groups among respondents [1.85, 1.73, and 1.97 at 1-6 months, 6-12 months, and 1-5 years post-surgery (P=0.635), respectively]. A high number of respondents reported 1-3 bowel movements per day [50.0, 62.8, and 51.4% at 1-6 months, 6-12 months, and 1-5 years post-surgery (P=0.428), respectively], Bristol stool scale categories which represent diarrhea-like stools [51.9, 35.6, and 46.7% at 1-6 months, 6-12 months, and 1-5 years post-surgery (P=0.356), respectively], and having discomfort due to flatulence [69.8, 74.6, and 79.4% at 1-6 months, 6-12 months, and 1-5 years post-surgery (P=0.272), respectively]. The majority of respondents (71.2, 67.8, and 52.3% at 1-6 months, 6-12 months, and 1-5 years post-surgery, respectively) reported that they received an explanation of the expected gastrointestinal symptoms before the surgery from the medical team.

Conclusions

A notable proportion of OAGB patients experience certain gastrointestinal symptoms postoperatively, including flatulence and diarrhea-like stools. More research is needed to establish a proper treatment algorithm for gastrointestinal disorders following OAGB.

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GASTROPEXY AS A PRIMARY APPROACH IN THE MANAGEMENT OF POST-SLEEVE FUNCTIONAL TWIST

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Background

The gastric twist is defined as an axial rotation of the gastric tube. The kink of the gastric tube along its longitudinal axis leads to valve-like mechanism preventing the stomach from emptying properly. Its incidence is still not perfectly clarified, in the recent literature, it is reported to be from 0.69-2%.

Objectives

Our study aims at introducing gastric fixation as primary management of gastric twist after sleeve gastrectomy.

Patients and Methods

24 patients presented with vomiting, regurgitation, reflux, and excessive weight loss 1–2 months within an average of 1 month after gastric sleeve for weight loss. Gastropexy is performed using proline 2-0 in three stiches: between the left crus of the diaphragm and the posterior part of the fundus of the sleeved stomach; between the pancreatic fascia and midbody of stomach; and between the posterior antrum of stomach and the transverse mesocolon.

Results

Mean time of symptom resolution was 7 days (2–12 days). 99% Success rate. Six months follow up; recovery was uneventful in all patients. No post-procedure complications. No recurrence of twist.

Conclusion

To avoid an axial twist of the sleeved stomach, you have to bear in mind some crucial technical steps while performing sleeve gastrectomy. Proper alignment of the staples and symmetric division of the anterior and posterior walls of the stomach. Try to work at ease; if you are not ergonomically comfortable while performing single-port sleeve gastrectomy, you have to convert it to the conventional technique, whether three or four ports. Always remember, “safety comes first.” This will prevent the unequal tension during stapling. An extra step is to fix the staple line to the pancreatic fascia especially when the gastric tube tends to be floppy at the end of the procedure. Avoid tight stapling at the site of the incisura.

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GENETICS OF WEIGHT LOSS: 5 BEST TARGET GENES TRIGGER THE WEIGHT LOSS

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Background

While hundreds of genes are associated with several aspects of obesity. The researchers have pinpointed some of the specific genes, after eating that influence body composition, ability to burn calories and use energy, appetite levels and more. There is not a single gene responsible, but rather hundreds that are allied to glucose absorption, appetite and metabolism.

Objective

The identification of target genes in an individual makes it easy to create a custom weight-loss regimen that works for genetic makeup and increases chances of losing weight and maintaining weight loss over time.

Methods

Reviewed and analysed the findings for best 5 genes that are directly associated with the weight loss from several past studies.

Results

Studies illustrate that most targeted genes for weight loss are iroquois homeobox gene 3 (IRX3), melanocortin-4 receptor (MC4R), Ankyrin-B, FTO and Pannexin 1. The IRX3 is a gene that may cause difficulty losing weight. Studies have found that individuals with deficient expressions of this gene showed a 30% loss in weight. The MC4R gene is a known contributor to human metabolism. This gene regulates energy after eating and contributes to feelings of hunger. The presence rare variant of this gene is a bit more possible to be overweight. Ankyrin-B is a gene known for triggering obesity in its variant form. It raises fat cells to absorb glucose at an enhanced rate, which significantly increases the size of the cell. The FTO gene, is found on chromosome-16. It is protein linked with obesity and fat mass. Researcher pointed this gene has shown to have a direct associate to obese individuals, as those with this gene have a 30% higher chance of being overweight. And, Pannexin 1 is the gene that regulates obesity and the accumulation of fat. The presence of this gene is associated with a higher risk of obesity.

Conclusions

Genetics play an important role in weight loss. A gene panel can be customized with these five best target genes to find out genetic changes for better weight loss management. This gene panel can be advantageous to completely recognize the role of genetics in obesity.

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HEALTH-RELATED QUALITY OF LIFE AND COST-EFFECTIVENESS OF GASTRIC PPLICATION IN THE TREATMENT OF MORBID OBESITY

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Background

Laparoscopic gastric greater curvature plication (LGGCP) is a novel bariatric procedure. It is unknown if LGCCP is a cost-effective strategy for treating patients with morbid obesity. The aim of this study was to assess weight loss, health-related quality of life, and cost-effectiveness of LGGCP in treating individuals with morbid obesity.

Methods

Between April 2017 and December 2018, 112 patients were included in this study. Fifty patients had LGGCP, and sixty-two patients underwent laparoscopic Roux-en-Y gastric bypass (LRYGB). Demographics, weight loss and health-related quality of life were analyzed. This study performed a real-world cost-effectiveness analysis of LGGCP versus LRYGB, estimating the incremental cost-effectiveness ratio (ICER) per quality-adjusted life-year (QALY). The analysis was done from the perspective of the Lithuanian National Insurance Fund, a public body responsible for healthcare coverage in Lithuania. The designed Markov model.

Results

The average operation time was similar in the LGGCP and LRYGB groups, with 78.20 (16.56) and 74.92 (15.85) minutes. The mean %EBMIL 1 year after surgery was 59.05 (25.34) in the LGGCP group and 82.40 (19.03) in the LRYGB group ($P < 0.001$) and 3 years after was 41.44 (26.74) and 75.59 (19.14), respectively ($P < 0.001$). After surgery, the quality of life of both groups improved statistically significantly. There was no difference in HRQoL between groups in one year ($P = 0.247$), but in three years after surgery, it was significantly better in the LRYGB group ($P < 0.001$). The undiscounted and discounted life expectancy was increased in the LRYGB group as compared to the LGGCP treatment arm (0.88 LY and 0.28 LY, respectively). The estimated lifetime costs (EUR 2020) were lower by 555.25 euros in the LRYGB group. LRYGB was dominant (less costly and more effective) than LGGCP when the incremental-cost effectiveness ratio was estimated. LRYGB was the dominant treatment option in 85.2 % of iterations, and the rest 14.8 % were not willing to pay more than 610 euros /QALY.

Conclusions

LGGCP patients lost significantly less weight and had a lower quality of life than LRYGB patients. LGGCP was more costly and less effective than LRYGB in treating individuals with obesity.

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HEART RATE VARIABILITY MEASURES, QUALITY OF LIFE AND DEPRESSION IN PATIENTS WITH OBESITY: PRELIMINARY RESULTS BEFORE BARIATRIC SURGERY

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Background

Heart Rate Variability (HRV) has been considered a transdiagnostic factor of psychopathology. Specifically, low HRV given by a withdrawal of parasympathetic activity has been found in depression, lower quality of life, and obesity.

Objectives

This study investigates the relationships between HRV, quality of life, and depression symptoms in adult patients with obesity one month before their bariatric surgery.

Methods

Sixty-seven patients with obesity (age: M=42.8±8.19 years; sex: male=6, females=61; N_(BMI>34,9)=10, N_(BMI>39,9)=57) were recruited in the Obesity Unit at the Pedro Ernesto University Hospital in Rio de Janeiro. Patients filled out the SF-36 questionnaire on the perceived quality of life (QoL), and the Hospital Depression Scale (HAD) questionnaire on the screening of depression. Thereafter, LF-HRV, HF/RSA, and RMSSD component of HRV were measured using the Faros 360° EKG-Holter for 15-minutes.

Results

Results are shown in Tables 1-2.

Conclusion

This study represents a first phase of a longitudinal research project investigating the psychological and physiological QoL of patients with obesity who are undergoing to surgical treatment. Preliminarily, we showed that these patients had a compromised psychological and physical well-being with greater parasympathetic withdrawal that was associated with lower QoL and depressive symptoms. Possibly, bariatric surgery may revert these findings and will achieve a good existential balance.

Table 1. Differences in parasympathetic activity by perceived quality of life.

HRV-Components	SF-36	N	Means	SD	F	Sig
LF-HRV	Mid	34	4,3084	0,78123	9,882	0,003
	Low	33	3,6371	0,96011		
HF-HRV	Mid	34	5,9755	0,99185	4,853	0,031
	Low	33	5,3489	1,31819		
RSA-HRV	Mid	34	5,6844	0,95585	4,166	0,045
	Low	33	5,11	1,32347		
RMSSD	Mid	34	42,7382	19,4747	4,277	0,043
	Low	33	33,4273	17,2745		

Table 2. Differences in parasympathetic activity depending on depressive symptoms.

HRV-Components	Depression Scores HAD	N	Means	SD	F	Sig
LF-HRV	improbable	30	4,2043	0,63269	7,33	0
	possible	25	4,1134	1,10805		
	probable	12	3,1286	0,70432		
HF-HRV	improbable	30	6,0258	0,96844	4,85	0,03
	possible	25	5,6254	1,25298		
	probable	12	4,8563	1,27825		
RSA-HRV	improbable	30	5,7757	0,90743	4,17	0,05
	possible	25	5,354	1,25641		
	probable	12	4,565	1,2544		
RMSSD	improbable	30	41,6033	18,85673	4,28	0,04
	possible	25	40,024	18,75776		
	probable	12	25,625	14,87036		

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HIATAL HERNIA IN BARIATRIC SURGERY PATIENTS: ARE WE DIAGNOSING IT ACCURATELY?

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Background

Obesity has rapidly increased worldwide. Hiatal hernia (HH) is related to obese patients is commonly asymptomatic. There is scarce literature related to Hill classification and diagnosis of HH in obese patients.

Objective

Describe the relation of the finding of hiatal hernia in preoperative endoscopy in patients who underwent bariatric procedures in our institution in 2022.

Methods

A retrospective observational study with a prospective database was conducted. Patients with intraoperative or preoperative Upper Gastrointestinal endoscopy who underwent bariatric procedures were included. Endoscopic results were compared to surgical findings. Sensitivity, specificity, Chi2, and predictive values were calculated.

Results

1083 patients were included. The mean age of the patients was 40.96 years, 8.4 % were men and 91.6 % were women. 307 presented a HH. All hernias were laparoscopically repaired. The mean body mass index in the group was 42.46 kg/m² before intervention. Endoscopy sensitivity was 52.2% and specificity was 98.1%. A positive association was found if HH was diagnosed endoscopically OR 51.065 (IC 95%: 29.232-89.206). Chi2 showed an association of HH and Hill scale (III and IV) (x2: 496 p< 0.01).

Conclusions

A preoperative endoscopic finding of HH can be associated with a surgical finding of HH, with good specificity. Nevertheless, its sensitivity is low. Prospective studies are needed to validate our results.

Keywords: Obesity, Hiatal hernia, Bariatric Surgery, Metabolic, Endoscopic Hill classification.

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HIGH RESOLUTION MANOMETRY (HRM) FINDINGS IN POST OPERATIVE LAPAROSCOPIC SLEEVE GASTRECTOMY PATIENTS USING CHICAGO CLASSIFICATION 4.0 (CCV4.0) PROTOCOL

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Background

Now a days the development of gastroesophageal reflux (GERD) in sleeve gastrectomy (SG) patients has increased in reporting as it's being used as treatment for obesity. The purpose of this study is to describe High Resolution Manometry (HRM) findings in patients after SG using CCv4.0 protocol and determine if there is ineffective esophageal motility.

Objectives

Determine Ineffective Esophageal Motility with High Resolution Manometry in Laparoscopic Sleeve Gastrectomy patients using Chicago Classification 4.0 (CCv4.0) protocol. Determine the mean in IRP, DCI, DL values in High Resolution Manometry in Laparoscopic Sleeve Gastrectomy patients using Chicago Classification 4.0 (CCv4.0) protocol.

Methods

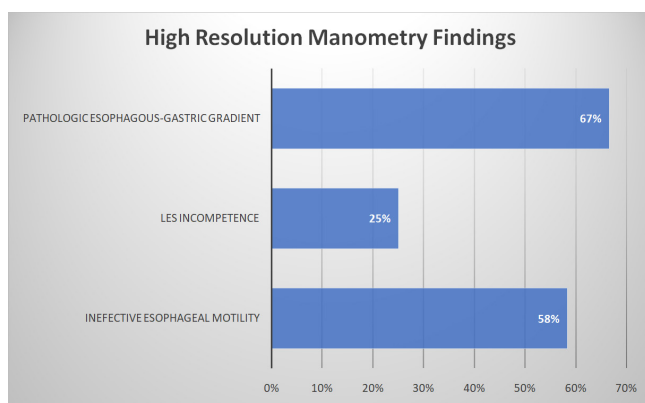
Data has been collected from a longitudinal retrospective database of an esophageal motility study. Out of 14 patients with Laparoscopy Gastric Sleeve surgery, 12 had High Resolution Manometry using CCv4.0.

Results

Out of 12 Laparoscopic Sleeve Gastrectomy patients who underwent High Resolution Manometry, 58% of them had ineffective esophageal motility, 25% had LES incompetence and 67% with pathologic esophago-gastric gradient. Also, is important to mention that one asymptomatic patient had esophago-gastric junction outflow obstruction (EG-JOO) and pathologic esophago-gastric gradient.

Conclusion

Using HRM and applying CCv4.0 protocol is an excellent tool to determine dysmotility in patients post SG. HRM should be recommended as follow up study in these patients whether the be symptomatic o asymptomatic, as we have shown that asymptomatic patients could be at risk of developing Dysmotility and pathological esophago-gastric gradient.



Parametro	Presion (mmHg)
GENDER F%/M%	58.3%/41.7%
AGE	50
PRIMARY POSITION	
SUPINE ESOPHAGEAL PRESSURES	
P1 Pressure above LES	56.9
P2 Pressure above LES	67.3
P3 Pressure above LES	73.4
MEAN IRP	9.6
MEAN DCI	1462.9
MEAN DL	6.7
MEAN P. EEI	25.4
ALTERNATE POSITION	
UPRIGHT ESOPHAGEAL PRESSURES	
P1 Pressure above LES	49.4
P2 Pressure above LES	59.7
P3 Pressure above LES	70.3
MEAN IRP	6.9
MEAN DCI	904.5
MEAN DL	6.9
MEAN P. EEI	17.7
MEAN PERISTALTIC RESERVE	2882.4

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HISTOLOGICAL GASTRIC WALL THICKNESS IN PATIENTS WITH LAPAROSCOPIC SLEEVE GASTRECTOMY

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Introduction

Laparoscopic sleeve gastrectomy (LSG) is a standard procedure due to its low complication rates and favorable outcomes. We reported the gastric wall thickness with resected specimens using measurement device. However, optimal staplers for LSG were still controversial. In this study, we investigate the histological actual gastric full-layer thickness (FLT) and muscle layer thickness (MLT) measurements in formalin-fixed resected stomachs.

Materials and Methods

Between February 2020 and March 2023, we performed LSG in 33 patients with an average age, body weight, and body mass index of 45 years, 101 kg, and 37 kg/m², respectively. We measured the histological FLT and MLT at the antrum, body, and fornix using resected specimen fixed with formalin. And we investigated the factors related to the gastric wall thickness (FLT and MLT).

Results

The average FLT and MLT were 2.80mm, 1.08mm at the antrum, 2.6mm, 0.94mm at the body and 2.4mm, 0.84mm at the fornix. We found that the average FLT and MLT at the antrum was significantly thicker than the FLT and MLT at the fornix (P=0.03, 0.007). Comorbidities were diabetes in 15 cases (46%), hypertension in 19 cases (58%), fatty liver in 19 cases (58%), obstructive sleep apnea in 18 cases (55%) and dyslipidemia in 22 cases (67%). There was a statistically significant relationship between fatty liver and the FLT, and diabetes and MLT at the fornix, respectively.

Conclusion

Comorbidity might have affect FLT and MLT at the fornix. Further accumulation of cases is necessary in the future.

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HYPOVITAMINOSIS D AND “METABOLIC” INFLAMMATORY STATUS IN PATIENTS WITH OBESITY

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Background and Objectives

Since obesity is linked to a systemic chronic inflammatory status and hypovitaminosis D, aims of our study were to assess the incidence of hypovitaminosis D in patients with obesity and the correlations between vitamin D levels, inflammation's indices and bioimpedance measures.

Methods

A retrospective study was conducted on a cohort of patients with obesity. The inflammation-based prognostic scores, the diagnosis of liver fibrosis, the systemic inflammatory indices and bioimpedance measures were analysed. The linear relationship between 25(OH) D levels and continuous variables was assessed through Spearman correlation coefficient, and to determine significant predictors of 25(OH)D levels a stepwise multiple linear regression was used.

Results

On 207 patients enrolled, the mean value of 25(OH)D was 19.13 ng/mL. In the deficiency subgroup an inverse correlation with BMI and ECW was recorded ($p = 0.023$, $p = 0.033$). Most of patients with high score of liver fibrosis presented low 25(OH)D level. SII inflammatory score, body fat index and PhA were predictive for hypovitaminosis D. At multivariate analysis, in the 25(OH)D deficiency group, body fat index and ferritin were predictive variables of hypovitaminosis D ($p = 0.005$ and $p < 0.001$).

Conclusion

Although the limited sample size, our study confirmed the high prevalence of insufficiency and deficiency vitamin D in a severe obese population and showed the strong association between hypovitaminosis D and inflammatory indices. Our results aimed to offer a further contribute to better understand the underlying mechanisms regulating the relationship between 25(OH)D levels and inflammation.

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IMAGE-GUIDED SURGERY FOR COMMON BILE DUCT STONES AFTER ROUX-EN-Y GASTRIC BYPASS

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Background

The relationship between obesity with common bile duct stone (CBDS) is close and increases after a Roux-en-Y gastric bypass (RYGB). Due to the anatomical modification, direct endoscopic access is not always possible. For this reason, image-guided surgery (IGS) by percutaneous transhepatic biliary drainage (PTBD) of the common bile duct (CBD) could be a first-line approach for the treatment of post-RYGB choledocholithiasis.

Objective:

The aim of this study was to analyze the feasibility and safety of CBDS treatment after RYGB with IGS.

Materials and Methods

We present a descriptive retrospective observational multicentric study on the treatment of choledocholithiasis in patients operated on for RYGB using IGS through a minimally invasive approach by PTBD. The diagnosis of CBDS was made according to the symptoms of the patients, supported by blood tests, and medical images. Treatment was planned in two stages: in the *first step*, a PTBD was performed, and in the *second step* the choledocholithiasis was removed.

Results

Of a total of 1403 post-RYGB patients, 21 presented choledocholithiasis. Of these, $n = 18$ were included. Symptoms were reported in $n = 15$ (8 cholestatic jaundice, 7 cholangitis), whereas $n = 3$ were asymptomatic. Percutaneous treatment was performed in all these patients, treated with a balloon and stone basket. A hyperamylasemia without pancreatitis was observed in 3 patients. No complications or deaths associated with the procedure were reported. The average hospital stay was 8.6 days.

Conclusion

IGS is an interesting option for the treatment CBDS after RYGB. For these patients, PTBD is feasible and safe.

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IMPACT OF A PRECONCEPTION AND ANTENATAL PROGRAM ON MATERNAL AND NEONATAL OUTCOMES IN PREGNANT WOMEN FOLLOWING BARIATRIC SURGERY

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Background

Bariatric surgery (BS) decreases obesity-related complications in pregnancy. However, it is reported an increased risk of cesarean and preterm deliveries and small for gestational age (SGA) newborns, maybe related to maternal nutrient deficiencies. According to the current literature, prevalence of SGA is about 20% in natural pregnancies and >30% in in vitro fertilization (IVF) pregnancies following BS.

Objective

The aim of this study was to assess whether the addition of a preconception and antenatal dietitian-nutritionist intervention (DN-int) to the structured standard care (SC) of endocrinologist and gynecologist follow-up has a summative beneficial effect on maternal and neonatal outcomes in pregnancies following BS.

Methods

This retrospective cohort study enrolled pregnant women underwent BS at a tertiary hospital between 2017-2022. We compared a preconception and antenatal DN-int to SC groups. DN-int consisted in a nutritional and weight control support and specific healthy lifestyle counseling. Serum levels of protein, albumin and prealbumin were documented from preconceptional period and every pregnancy trimester, and tailored supplementation strategy to restore maternal protein serum levels if required. Gestational weight gain (GWG), maternal outcomes and neonatal birth weight (BW) were evaluated. Clinical and analytical data were obtained from medical records.

Results

Data from 73 singleton pregnancies were obtained (56,1 % Roux-en-Y gastric bypass, 43,8% Sleeve Gastrectomy); pregestational BMI was 30,73±2,9 kg/m², maternal age 35,2±4,8 years and BS-pregnancy interval 56,8±48,7 months. 33 women (45,2%) received DN-int, with a higher percentage of IVF pregnancies when compared to SC group (27,2 vs 7,5 %, p=0.045) and a tendency to higher maternal age. No significant differences were found between groups in terms of type of BS, maternal nutritional status, GWG (9,1±9,6 kg vs 9,9±6,8 kg), caesarean delivery (25,8% vs 35,1%), preterm delivery (0,1 vs 0,05%), neonatal BW (3.026,2 ±441,5 g vs 3.109,1 ±464,8 g) or prevalence of SGA (9,1 vs 11,1%) respectively.

Conclusions

According to our data, a multidisciplinary program in pregnant women with BS is effective to reduce most of the adverse maternal and neonatal outcomes associated to BS described in the literature, suggesting the DN-int minimize these complications despite the cumulative condition of BS and IVF.

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IMPACT OF BARIATRIC SURGERY ON PCOD AND FEMALE REPRODUCTIVE HEALTH

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Introduction

Obesity is a metabolic disease, negatively impacts female reproductive health. PCOD is a common metabolic disorder of reproductive age group females which affects fertility. Bariatric surgery significantly improving metabolic disorders by reducing excess body weight.

Objective

This study was aimed to analyze reproductive health and maternal outcomes of female following bariatric surgery

Method

Single institutional retrospective study of prospectively database of post bariatric female. Age between 14 to 30 years and minimum 3 years follow-up. Remaining information collected through telephone conversation. Total population = 112.

Group A (PCOD)

Mean BMI before BS-41.5±6.8 kg/m²

Excess BMI loss after surgery 76.6%

Parameters	Before Surgery	After Surgery	P-Value
Hirsutism	27	25	0.827
Amenorrhoea	42	5	0.001
Menorrhagia	20	5	0.048
Dysmenorrhoea	15	15	1.000
Oligomenorrhoea	12	3	0.102
DUB	35	3	0.001
Acne	7	5	0.655
Hair fall	5	7	0.655
Dark patches on the skin	8	5	0.655

Group B (primary infertility)

Total conception	18(43.75%)(p=0.61)
Natural conception	8 (42.9%)
Conception period	21.4±2.3 months
Mean BMI before BS	48.5±7.9kg/m ²
Mean BMI during conception	31.8±6.3kg/m ²
% EWL	67.4%
% EBMIL	71.8%

Group C (conceived post Bariatric surgery)

Total no	Clinical conditions	+	p-value
48	Early term delivery	30 (63.2%)	0.005
	Low birth weight	23(47.4 %)	0.819
	Normal vaginal delivery	35 (73.7%)	0.019
	Maternal anemia	17 (36.8%)	0.251

Results

PCOD symptoms resolved after BS. 5% EWL improve PCOD symptoms. Fertility rate– 43.75%, 10 % reduction of weight could improve fertility rate. C-section in India -17.2%, in our study- 26.3%. less calcium ion (Ca²⁺) influx in the myometrium causing poor uterine contractility in obese patients due to high Leptin and cholesterol. Maternal anemia in India 65–75% in post-BS patients 36.8% (p = 0.251). could be due to deficiencies in the nutritional components like iron, folate, vitamin B12 and vitamin A.

Conclusion

Bariatric surgery could provide significant improvement in menstrual abnormalities, primary infertility and maternal outcomes. Adequate follow-ups could improve maternal and post-natal infants out comes with proper coordination between obstetric and the bariatric team.

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IMPACT OF COMORBIDITY ON THE RISK OF PREMATURE AGEING IN PATIENTS WITH SEVERE OBESITY

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Background

Obesity disease is a significant risk factor for the development of comorbidities - type 2 diabetes, hypertension, dyslipidaemia, cancer. Ageing results in the accumulation of damaging factors leading to the development of chronic diseases. Telomere length, level of neurocognitive function, metabolic age are recognised markers of biological age. It has been shown that patients with obesity are at a premature stage of ageing in terms of higher metabolic age and shorter telomeres than the population without obesity. The underlying factors generating premature ageing in patients with obesity are unclear.

Objectives

The aim of this study was to investigate the effects of obesity parameters (BMI, percentage body fat and visceral fat) and comorbidity on obesity-related ageing.

Methods

All patients were recruited in 2nd Department of General Surgery in Jagiellonian University Medical College from July 2020 to May 2021. 133 patients were included and divided into two groups: SG - population with severe obesity (BMI ≥ 40 kg/m² or ≥ 35 kg/m² with comorbidity, n=100) and CG - the group of healthy volunteers (BMI between 18.5 and 24.9 kg/m², n=33). DNA material sampled from serum leukocytes was isolated for PCR telomere length assessment, the Wiscosin Card Sorting Test and the Colour Linkage Test for cognitive function assessment were performed, body composition was analysed by bioimpedance and a history of comorbidities was taken.

Results

In the linear regression model BMI, adiposity and visceral fat levels were not shown to have a statistically significant effect on markers of biological age. Multivariate ANOVA analysis of variance showed that the number of comorbidities significantly affected metabolic age and cognitive ability ($p < 0.05$). Cognitive performance was significantly lower in the study group the more diseases there were.

Conclusion

Comorbidity in patients with obesity results in reduced cognitive function and higher metabolic age. In population with obesity and comorbidities, it is worth considering conducting cognitive function assessment tests.

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IMPACT OF METABOLIC SURGERY ON GLYCEMIC CONTROL IN KOREAN DIABETES PATIENTS WITH MORBID OBESITY

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Background

This study aimed to evaluate the effect of metabolic surgery on the improvement of diabetes in Korean type 2 diabetes patients according to the baseline severity of diabetes.

Methods

We retrospectively reviewed 49 patients with type 2 diabetes who underwent bariatric/metabolic surgery from Mar. 2018 to Dec. 2022. Diabetes status before and at 12 months after surgery was evaluated and compared between the different surgery types and diabetes severity. A modified ABCD score was used to classify the severity of diabetes at baseline as follows; mild (ABCD score 7-10), moderate (ABCD score 4-6), and severe (ABCD score 0-3) groups.

Results

The patients had a body mass index (BMI) of 39.2 ± 6.1 kg/m², an HbA1c of 8.0 ± 1.7 % at baseline, and a mean duration of diabetes was 3.2 ± 4.0 years. Diabetes severity was severe in 10.2% of the patients, moderate in 36.7%, and mild in 53.1%. All patients showed improvement in type 2 diabetes. Among them, complete remission (CR) occurred in 80.0% of and a mean HbA1c drop in all patients was 2.4 ± 1.7 % at 12 months. However, the severe diabetes group showed only a 20.0% CR rate, which is significantly lower than 78.3% and 64.3% in the mild and moderate groups ($p=0.007$). There was no difference in CR rate according to the surgery types ($p=0.739$).

Conclusion

Bariatric/metabolic surgery is an effective means of treating type 2 diabetes in Korean diabetic patients with morbid obesity. Early intervention is vital to maximize the effect of metabolic surgery, as the more severe diabetes becomes, the less effective the surgery is.

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IMPACT OF PERIOPERATIVE ANTIBIOTIC PROPHYLAXIS ON READMISSION RATES AND POSTOPERATIVE COMPLICATIONS IN LAPAROSCOPIC GASTRIC BYPASS SURGERY: A RETROSPECTIVE STUDY

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Background

Perioperative antibiotic prophylaxis (PAP) is one of the most studied and standardized measures for prophylaxis of wound infections (SSI). The benefit of this preventive measure for operations, such as colorectal surgery, is scientifically evident. According to current international guidelines for bariatric surgery, PAP is recommended. However, this recommendation is based on a low level of evidence.

Objectives

We investigated whether the omission of PAP for laparoscopic gastric bypass (RYGB) leads to an increased readmission rate due to SSI or promotes the occurrence of postoperative complications in the first 30 postoperative days.

Methods

The study retrospectively analyzed prospective summarized data from two patient groups who underwent RYGB at the Department of Obesity and Metabolic Surgery at Helios Klinikum Berlin Buch. One group received PAP with 3g cefuroxime i.v. and the other did not. The study was conducted from 01/12/2019-31/12/2020.

Results

The total number of patients studied was 496. A total of 261 patients (52.6%) received PAP (3g cefuroxime i.v.;). No PAP was received by 235 (47.4%) patients. Inpatient readmission within 30 days occurred in 14 of the 496 patients (2.8%), of which 8 of 235 (3.4%) had no PAP and 6 of 261 (2.31%) had received a PAP ($p=0.458$). The incidence of wound infection (SSI) was not significantly different between groups ($p=0.65$). Complications according to Clavien-Dindo classification (CDK) were also not significantly different ($p=0.187$), yet patients without PAP remained hospitalized significantly longer ($p=0.009$). The seven patients with SSI in the group without PAP had a mean inpatient stay of 13.28 days. The two patients with SSI and PAP were discharged on postoperative day 4. Three of the nine patients with SSI required surgical revision. All these cases occurred in the group that did not receive PAP. Five of the nine cases had microbiological evidence of pathogens; these patients were also in the group without PAP.

Conclusion

PAP does not appear to have a significant impact on inpatient readmission rates. However, omitting it potentially leads to a prolonged inpatient stay. Prospective follow-up studies with power-calculated case numbers are necessary to test our hypothesis.

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IMPACT OF PREOPERATIVE WEIGHT LOSS IN PREDICTING WEIGHT LOSS OUTCOMES AFTER BARIATRIC SURGERY

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Purpose

The present study aimed to evaluate the impact of preoperative weight loss on the total weight loss outcomes after bariatric surgery and how to predict the overall weight loss.

Methods

114 patients who underwent bariatric surgery (except for simple band removal) in our center between July 2017 and Dec 2022 were retrospectively reviewed. Postoperative weight loss (%postop WL) was calculated based on the BMI at the time of surgery, while overall weight loss (%overall WL) on the highest BMI within 3 months before the index surgery. The maximal %overall WL (%MWL) prediction model was derived from the data from 79 patients who reached their nadir BMI during the follow-up. Weight loss failure was defined as %MWL < 20% and factors associated with weight loss failure were also analyzed.

Results

37 patients (32.5%) were managed with anorectic agents to achieve weight loss before bariatric surgery. The median duration of the drug use was 49.5 days (range, 2 – 1000) and these patients lost 4.2 ± 5.5 % of their initial body weight, which was significantly higher than those without medications (0.3 ± 2.6 %, $p < 0.001$). In patients with greater preoperative weight loss (> 5%), %postop WL based on the BMI at the time of surgery appeared inferior in the early postoperative period; however, the %overall WL was significantly greater in this group. The mean %MWL at the nadir BMI was 25.4 ± 7.6 %. The %MWL could be predicted with procedure type, preoperative WL, presence of diabetes, and age (adjusted $R^2 = 0.233$). Weight loss failure was associated with the presence of diabetes and smaller preoperative weight loss.

Conclusion

To reduce the bias in the interpretation of weight loss results, the % overall WL based on the highest BMI should be used in weight loss reporting in patients with preoperative weight loss. Greater preoperative weight loss was associated with greater %MWL after bariatric surgery.

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IMPACT OF ROBOTIC ASSISTANCE ON COMPLICATIONS IN BARIATRIC SURGERY AT EXPERT LAPAROSCOPIC SURGERY CENTERS. A RETROSPECTIVE COMPARATIVE STUDY WITH PROPENSITY SCORE

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Objective

To investigate the way robotic assistance affected rate of complications in bariatric surgery at expert robotic and laparoscopic surgery facilities.

Summary background data

While the benefits of robotic assistance were established at the beginning of surgical training, there is limited data on the robot's influence on experienced bariatric laparoscopic surgeons.

Methods

We conducted a retrospective study using the BRO clinical database (2008–2022) collecting data of patients operated on in expert centers. We compared the serious complication rate (defined as a Clavien score ≥ 3) in patients undergoing metabolic bariatric surgery with or without robotic assistance. We used a Directed Acyclic Graph to identify the variables adjustment set used in a multivariable linear regression, and a propensity score matching to calculate the Average Treatment Effect (ATE) of robotic assistance.

Results

The study included 35,043 patients (24,428 SG; 10,452 RYGB; 163 SADI-S), with 938 operated on with robotic assistance (801 SG; 134 RYGB; 3 SADI-S), among 142 centers. Overall, we found no benefit of robotic assistance regarding the risk of complications (ATE= -0.05, $p=0.794$), with no difference in the RYGB+SADI group ($p=0.322$) but a negative trend in the SG group (more complications, $p=0.060$). Length of hospital stay was decreased in the robot group (3.7 ± 11.1 vs. 4.0 ± 9.0 days, $p < 0.001$).

Conclusion

Robotic assistance reduced the length of stay but did not statistically significantly reduce postoperative complications (Clavien score ≥ 3) following either GBP or SG. A tendency toward an elevated risk of complications following SG requires more supporting studies.

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IMPACT OF SMOKING HABIT ON THE OUTCOMES OF ENDOSCOPIC SLEEVE GASTROPLASTY

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Background

The effects of smoking habits on weight are well-known regarding bariatric surgery. However, given that this patient population is inherently weight-concerned, understanding the effects of tobacco use on postoperative weight loss in bariatric endoscopy is essential to guiding clinicians in counseling patients in this field.

Materials and Methods

A prospective dataset of all ESG procedures performed (May 2017-October 2021) in a tertiary referral centre was assessed retrospectively. Data on smoking habits (smoker, non-smoker, and previous smoker) were collected.

Results

Smoking habits were available for 275 subjects: 144 no smokers (NS; 52,4%), 51 smokers (S; 18,5%), previous smokers (EX-S; 29,1%). At baseline, EX-S were younger than NS and S subjects, whereas there were no differences in BMI and weight. Average TBWL, EWL and WL were similar between the three groups at 6,12 and 24 months (as shown in Table 1). In the NS group, five subjects underwent revision procedures (4 Re-ESG, 1 Surgery) after 24 months, whereas one EX-S underwent Re-ESG after six months. No revision was reported in the S group.

Conclusion

Our analysis, with the strengths of a large cohort and a long-term follow-up, showed that smoking habits do not influence the efficacy of ESG for up to 24 months.

Table 1.

	6 MONTHS			
	WL	EWL	TBWL	BAROS
S (N=46)	20,4 (7,2)	53,8 (20,4)	18,1 (5,6)	4,4 (1,8)
NS (N=134)	17,9 (8,0)	53,3 (23,6)	16,9 (6,4)	4,0 (1,5)
EX-S (N=73)	19,7 (7,7)	54,7 (21,8)	18,1 (6,4)	3,9 (1,8)
p	0,094	0,916	0,306	0,365
	12 MONTHS			
	WL	EWL	TBWL	BAROS
S (N=43)	19,0 (10,6)	51,0 (29,8)	17,0 (9,1)	4,0 (2,3)
NS (N=133)	15,5 (10,3)	49,4 (30,9)	15,7 (9,1)	3,6 (2,2)
Ex-S (N=72)	17,3 (12,1)	48,3 (30,4)	16,0 (10,1)	3,6 (2,2)
p	0,44	0,902	0,724	0,561
	24 MONTHS			
	WL	EWL	TBWL	BAROS
S (N=28)	14,4 (14,0)	32,5 (37,0)	12,2 (12,5)	3,1 (2,2)
NS (N=75)	14,7 (11,9)	39,6 (29,8)	13,3 (10,0)	3,0 (2,4)
Ex-S (N=41)	16,2 (10,6)	43,6 (24,4)	14,9 (8,7)	3,1 (2,2)
p	0,095	0,095	0,544	0,980

WL= Absolute Weight Loss; EWL=Excess Weight Loss; TBWL= Total Body Weight Loss; BAROS = Bariatric Analysis and Reporting Outcome System questionnaire.

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IMPLEMENTING THE OVERSTITCH ENDOBARIATRIC PLATFORM FOR ROUX-EN-Y GASTRIC BYPASS PATIENTS WITH DUMPING SYNDROME & REACTIVE HYPOGLYCAEMIA: A QUALITY IMPROVEMENT PROJECT

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Background

Dumping Syndrome (DS) and Reactive Hypoglycaemia (RH) significantly impact the quality of life in patients following Roux-en-Y gastric bypass (RYGB) surgery. This quality improvement project aimed to establish a service providing endoscopic transoral outlet reduction (TORe) using the Overstitch endobariatric platform to alleviate the symptoms experienced in patients with DS and RH.

Objectives

Evaluate the feasibility of implementing a TORe service using a SWOT analysis. Train the surgical team in using the Overstitch endobariatric platform. Assess the safety and efficacy of TORe in RYGB patients with DS and RH.

Methods

A SWOT analysis was conducted to assess the feasibility of implementing the TORe service. Stakeholders included patients, surgeons, physicians, endoscopy department, and allied healthcare professionals. Steps included virtual training with a field expert, patient eligibility determination, hands-on training in a simulated setting, and proctor-guided TORe procedures. Patients were selected after exhausting conservative management options. Pre- and post-procedural symptom scores were collected.

Results

Three patients underwent TORe without immediate complications, indicating early success in safety and efficacy. The TORe service showed promising results in RYGB patients who had exhausted other management options.

Conclusions

This quality improvement project demonstrates the potential of the Overstitch endobariatric platform for implementing TORe procedures in RYGB patients with DS and RH. The project reinforces that TORe can be safely integrated into the patient pathway, offering relief from symptoms of DS and RH. Positive outcomes encourage further study and long-term follow-up to assess the platform's effectiveness in managing DS and RH in patients post RYGB.

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IMPROVEMENT OF THYROID FUNCTION AFTER BARIATRIC SURGERY

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Background

Bariatric surgery has been proven to improve almost all obesity-related co-morbidities. Hypothyroidism is a common finding in the obese population, and many tend to believe their obesity is related to poor thyroid function. However, data shows that obesity worsens thyroid function, which is why weight loss can lead to remission of hypothyroidism.

Objective

To analyze the retro prospective data with respect to thyroid function before and after bariatric surgery.

Method

It is a retro prospective study of 500 patients who have undergone Bariatric Surgery between 2011 and 2018. Of these, it was found 70 patients (n=70; 55 females) who were either clinically hypothyroid and on thyroid hormone replacement or had deranged thyroid function tests in the preoperative work up, and completed 1 year after surgery. Data was compared on the parameters of the thyroid function test and thyroid medication doses at base line, 3 months, 6 months and 12 months, 24 months along with body mass index reduction, resolution of other comorbidities, and nutrition status.

Results

68.6% (48/70) patients showed an improvement in their thyroid function, and 75% of these (36/48) did not need any medications 1 year after the surgery. Thyroid Stimulating Hormone (TSH) decrease not associated with higher body mass index reduction.

Results at 1 year	n	%
TFT same	22	31.4
Dose reduced (Improvement)	12	17.2
Off medications (Remission)	14	20
TFT improved (SH) (Remission)	22	31.4
Total	70	100

Conclusion

Hypothyroidism and subclinical hypothyroidism resolution are expected with bariatric surgery. Multiple mechanisms are responsible for the improvement in thyroid function, but a decrease in Thyroid Stimulating Hormone (TSH) is not associated with higher body mass index reduction. The role of the type of procedure is undetermined. Close monitoring and strong follow-up are mandatory.

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IMPROVEMENT OF WELL-BEING BY SOCIAL MEDIA TOOLS IN THE OBESE POPULATION: RETROSPECTIVE ANALYSIS OF A BARIATRIC CENTER OF EXCELLENCE EXPERIENCE

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Background

Social media platforms have become channels for the public to obtain information such as LINE Official Account, Meta, YouTube, Google search, etc. The use of social media tools in the healthcare industry has exploded in a decade. In bariatrics, social media tools can be used to promote health education knowledge, medical information, case sharing, and other information.

Objectives

This study focuses on social media applications in the field of bariatric surgery. Through social media tools, medical practitioners can have a chance to communicate with untreated obese patients and educate them about how obesity and its associated diseases affect their health. Subsequently, the necessity of seeking medical assistance can be evoked. Social media marketing strategies can be properly applied to create new life-changing opportunities for obese patients. The study aimed to present the experience of social media applications for obese patients in E-DA Weight Loss & Health Management Center (EDWHC).

Methods

In this study, a retrospective analysis was conducted. From 2020 to 2022, 2086 obese patients from EDWHC who underwent bariatric surgery are interviewed. The characteristics and outcomes of the patients were reviewed.

Results

The results of the study showed that respondents were more interested and curious about weight loss programs on social media than searched more for weight loss centers, hospital information, or surgeon names. Afterward, patients were more willing to start online counseling. Obese patients are more likely to visit a hospital if they encounter a professional online counselor. During the postoperative period, we can provide follow-up services such as health education videos or important considerations through social media to improve the quality of postoperative care.

Conclusion

Social media tools can give obese patients the chance to regain a better life when used appropriately. In addition, social media tools can also be used to maintain the doctor-patient relationship before and after surgery. Patients receive prompt and positive feedback, including awareness of their obesity problems, willingness to seek medical help, and comprehensive medical care. Altogether, social media is an advertising tool and includes e-Health functions such as medical education and postoperative follow-up.

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IMPROVING THE CARE OF PATIENTS WITH OBESITY NEEDING JOINT REPLACEMENT - TIME FOR A COMBINED ORTHO-BARIATRIC APPROACH?

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Background

Patients with obesity awaiting joint replacement surgery of the lower limbs may benefit from referral to weight-management services. (1) IFSO provide BMI criteria for referral to tertiary weight-management services including metabolic and bariatric surgery (MBS), however this does not always translate into clinical practice. (2, 3)

Objective

Our aim was to assess the number and management of patients with obesity attending orthopaedic clinics for consideration of lower limb joint replacement.

Methods

A retrospective analysis was undertaken of all patients attending orthopaedic clinics for joint replacement secondary to osteoarthritis, in the lower limbs, at a single centre, over a two year period. Details of demographics, BMI, comorbidities and management plans were recorded from electronic patient records.

Results

335 patients (60% of 558 cases) had BMI recorded and were used for subsequent analysis. 36% (n=120) of patients were eligible for referral to weight-management services. 10% (n=32) were refused joint replacement surgery due to BMI, of which 81% (n=26) were eligible for referral to weight-management services. Instead of surgery, these 32 patients were offered: physiotherapy (n=10, 38%), analgesia (n=12, 46%), non-specific weight-loss advice (n=16, 62%), GP referral for weight-loss (n=6, 23%), and tertiary service referral for weight-loss (n=2, 8%), (Figure 1).

Conclusions

BMI is an important risk factor for orthopaedic operations and increased efforts should be made to record it pre-operatively. An MDT approach would capture the notable proportion of patients who are not being appropriately referred to weight-management services or for MBS, which may impact on their quality of life and postoperative outcomes.

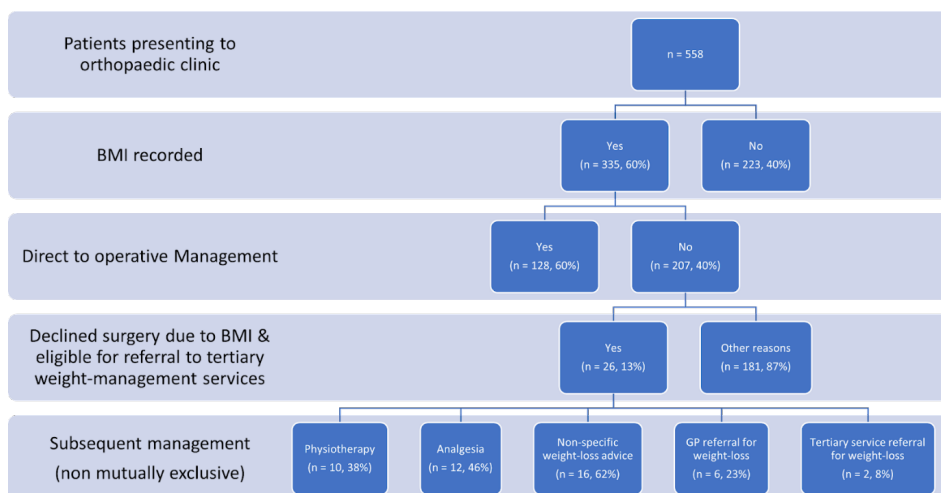


Figure 1. Management of patients declined surgery due to their BMI.

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INCIDENCE AND CHARACTERISTICS OF CHOLELITHIASIS FOLLOWING BARIATRIC SURGERY: A SINGLE-CENTER EXPERIENCE

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Background

Cholelithiasis, or the formation of gallstones, is a common complication after bariatric surgery. Despite its prevalence, there is limited research on the incidence and characteristics of cholelithiasis in bariatric surgery patients. Understanding the incidence and risk factors of cholelithiasis can help improve patient care and prevent postoperative complications.

Objective

The objective of this study is to evaluate the incidence and characteristics of cholelithiasis following bariatric surgery in a single-center cohort.

Methods

This is a retrospective analysis of patients who underwent bariatric surgery at a single center between May 2015 and December 2022. Data on patient demographics, comorbidities, surgical technique, and postoperative outcomes were collected and analyzed. The incidence of cholelithiasis after bariatric surgery and its associated risk factors were also evaluated.

Results

A total of 224 patients who underwent bariatric surgery were included in the study, and 28 (12.8%) developed cholelithiasis after surgery. The mean time to cholelithiasis diagnosis was 17.2 months postoperatively. Patients who developed cholelithiasis were more likely to have a higher BMI and a history of gallstones prior to surgery. The incidence of cholelithiasis was higher in patients who underwent mini gastric bypass compared to sleeve gastrectomy (16.5% vs. 8.6%). Most patients (83%) who developed cholelithiasis were asymptomatic, and only a small proportion (17%) required surgical intervention.

Conclusion

Cholelithiasis is a common complication after bariatric surgery, with a 12.8% incidence in this single-center cohort. Patients who underwent mini gastric bypass and those with a history of gallstones prior to surgery were at a higher risk of developing cholelithiasis. Most patients with cholelithiasis were asymptomatic, and surgical intervention was only required in a small proportion of cases. These findings highlight the importance of monitoring for cholelithiasis in bariatric surgery patients, particularly in those at higher risk, to prevent postoperative complications.

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INCIDENCE OF BARRETT'S ESOPHAGUS FOLLOWING SLEEVE GASTRECTOMY IN SOUTHEAST ASIAN POPULATION

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Background

Variable incidences (up to 18.8%) of Barrett's esophagus (BE) have been reported following Sleeve Gastrectomy (SG), however, there is no published data from the Southeast Asian population.

Objective

To determine the incidence of BE following SG in Southeast Asians.

Methods

In this cross-sectional observational study, all patients who had undergone SG from 2008 to 2021 and completed a minimum of 1-year follow-up were contacted to participate. Preoperative data were retrieved from a prospectively maintained database. On recruitment, all patients underwent barium swallow and upper gastrointestinal endoscopy (UGIE), and weight parameters and reflux symptoms were recorded.

Results

114 patients with no preoperative evidence of BE were included. The mean follow-up duration was 5.4 ± 3.1 years. On follow-up endoscopy, Barrett's was suspected in 4 patients. However, three patients had columnar-lined epithelium (CLE) and only one patient (0.87%) had evidence of intestinal metaplasia (IM) without dysplasia on histology. Reflux esophagitis (grade LA-A) resolved in nine out of 11 patients, while the rate of de novo esophagitis was reported in 22.3%. The mean reflux Symptom Severity (SS) score increased from 0.6 ± 1.8 to 2.6 ± 5.4 ($p = 0.002$). The mean body mass index reduced from 44.1 ± 7.1 kg/m² to 33.6 ± 6.9 kg/m² ($p < 0.0001$), however, 25.8% of the patients experienced significant weight recidivism.

Conclusions

The incidence of BE after SG is low in Southeast Asians. Hence, endoscopic surveillance may not be recommended in these patients, solely to diagnose BE.

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INCIDENCE OF CHOLELITHIASIS AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY VERSUS LAPAROSCOPIC ROUX EN Y GASTRIC BYPASS IN FEMALE SAMPLE WITH OBESITY

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Background

Obesity is a multifactorial disease with a multifactorial etiology. The body mass index (BMI) is the most commonly used criterion classifying obesity. People with obesity are four times more likely to develop cholelithiasis than non-obese; there is a high risk of developing Cholelithiasis following bariatric surgery. This is strongly linked to rapid weight loss and has been reported for many decades; The prevalence of Cholelithiasis following bariatric surgery varies.

Objectives

is to compare the incidence of developing cholelithiasis after laparoscopic sleeve gastrectomy (LSG) and laparoscopic Roux-en-Y gastric bypass (LRYGB) in females with severe obesity during the 1st year post surgery.

Methods

a prospective study including female patients met the inclusion criteria and underwent LSG and LRYGB in number of Iraqi hospitals done by one surgical team during the period from the 1st of January 2020 to 31st December 2020; Patients abdominal ultrasound and weight records were followed up one year after their surgeries in 6- and 12-months intervals.

Results

130 patients met the criteria operated for LSG and LRYGB distributed as 102 patients operated by LSG and 28 patients operated by LRYGB; all sample were females; documented not having gallstones previously; with mean age of (36.4±8.8) year for LSG and (38.6±8.0) year for LRYGB. Patients Mean initial body weight was 120.22±15.00 kg (BMI 46.26±4.99kg/m²) for LSG and 120.50±15.29 (46.41±5.31 kg/m²) for LRYGB; 15.7% of patients developed gallstone after sleeve gastrectomy and 28.6% of patients developed gall stone after roux en y gastric bypass one year after surgery. Abdominal ultrasound after 6 months shows gallstone developed in 9.8% of those who had LSG with EWL 52%; and 7.1 % for those who had LRYGB with EWL 59%. The gallstone is more significant after 6 months in LSG than LRYGB. after 12 months; gallstone developed in 6.5% of LSG patient who EWL 86%. and 23.1% in those had LRYGB with EWL 90%. the gallstone is more significant after 12 months in LRYGB than LSG.

Conclusion

After 6 months, LSG had a higher incidence of cholelithiasis, after 12 months, LRYGB had a higher incidence. Higher EWL% during the same interval correlates to cholelithiasis development.

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INCIDENCE OF POST-SURGICAL WEIGHT GAIN IN PATIENTS WHO UNDERWENT BARIATRIC SURGERY

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Background

Obesity and overweight are a global problem that affects people of both sexes, various age groups, and various social classes, among others. For this reason, a number of specialties have centered on its management, that is, a multidisciplinary team, which plays a crucial role in achieving the established objectives. This is why it is important to know the incidence of weight regain in patients who have already undergone a surgical procedure, as surgery is currently regarded as the intervention with the best long-term results, with the gastric sleeve and gastric bypass being the most common surgeries worldwide. In order to direct timely interventions to prevent weight gain and, consequently, the recurrence of comorbidities, thereby affecting the quality of life of our patients, decreasing morbidity and mortality, and increasing life expectancy, it is equally important to know the risk factors.

Objective

To determine the incidence of weight regain in patients who underwent bariatric surgery at the obesity clinic after two years of follow-up.

Material and methods

A retrospective cohort observational study conducted between January 1, 2016, and December 31, 2018.

Results

Among the 83 patients, 61 (73.4%) were female and 22 (26.5%) were male. Thirteen (15.6%) of the patients underwent gastric sleeve and 70 (84.3%) underwent laparoscopic gastric bypass. In the analysis of the incidence of weight regain, there was no statistical significance for the majority of the definitions, except for the one that considers an increase of 25% of the excess weight lost from the nadir weight ($p=0.02$), as well as the total weight ($p=0.000$) and BMI (0.001) reached in the two-year follow-up, in favor of the bypass, but without differences in the remission of comorbidities.

Conclusions

There is a significant difference in the incidence of weight regain between sleeve and laparoscopic gastric bypass, as defined by an increase of 25% of excess weight lost from nadir weight, as well as better results with bypass in terms of weight loss and BMI achieved at 24-month follow-up, with no difference in the remission of comorbidities.

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INCIDENCE OF SECONDARY HYPERPARATHYROIDISM AFTER THE ONE ANASTOMOSIS GASTRIC BYPASS TECHNIQUE IN BRAZIL

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Background

The One Anastomosis Gastric Bypass (OAGB) technique proposes the creation of a long gastric pouch of approximately 15-18cm (50-150ml). The gastroenteric anastomosis begins, 200 cm from the angle of Treitz. Among the possible late complications of bariatric surgeries is Secondary Hyperparathyroidism. The function of the parathyroid is to maintain the extracellular concentration of Calcium (Ca^{2+}) sufficient so that the nervous and muscular systems do not have difficulties. This mechanism occurs as follows: low plasma levels of Ca^{2+} are detected by the Ca^{2+} receptor (CaSR) which will trigger a signal cascade that will inhibit PTH secretion. This hormone will cause renal mobilization of reserves of these ions in the bone and indirect intestinal absorption. 99% of the body's calcium reserves are in the bones. Elevated serum levels of PTH for many months can lead osteopenia and osteoporosis. Bariatric surgeries are based on malabsorption of nutrients. When calcium is not being absorbed in the required amounts, plasma levels of calcium fall below the threshold. Consequently, parathyroid hormone secretion begins. Many studies have shown the relationship between Secondary Hyperparathyroidism and bariatric surgery, however, the intensity of this complication is related to the technique used. This study aims to analyze the levels of PTH after the OAGB technique.

Objectives

Evaluate the prevalence of secondary hyperparathyroidism in the postoperative period of patients undergoing the One Anastomosis Gastric Bypass technique.

Methods

Evaluate 60 medical records of OAGB.

Results

So far, 27 patients have been analyzed: 8 men and 19 women. PTH levels were altered in 11 patients: 8 were women and 2 were men. Patients aged 26 to 35 years were the ones who had the most changes in PTH, adding up to a total of 6.

Conclusion

Less than half of the patients (40.47%) had changes in PTH levels. The majority appeared in women (42%) showing that women may be at greater risk of developing Secondary Hyperparathyroidism. In addition, the age group with the greatest change was 26 to 35 (31%). The study is still ongoing and will update the current results with new patient data.

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INDICATORS OF THE RISK OF EARLY UNPLANNED ENDOSCOPIC GASTRIC BALLOON REMOVAL FOR BARIATRIC-METABOLIC SURGERY

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Background

We have set up a private UK bariatric service with self-referral or GP referrals, integrating a multidisciplinary self-reported bariatric screening questionnaire (BSQ) and multidisciplinary team (MDT) interview process offering a range of bariatric-metabolic weight loss procedures including the (Obera) endoscopic gastric balloon (EGB) to a well-motivated self-funding group of patients.

Objectives

Most of our patients completed their EGB insertion and planned removal, however some patients had an early unplanned EGB removal – the indicators of their risk factors were assessed.

Methods

All patients who proceeded to EGB were included to a local database, with demographics and excess weight loss (EWL) outcomes recorded until completion of 6 or 12 month Obera EGB.

Results

24 EGB insertions. Average age 49, Age range 23-70, 5M:19F. Average pre EGB BMI 36.6. EWL at 1 month average 19.6%, range 5-61%. Final EWL 42.1%, range 0-100%. Range of final weight loss completed EGB 0-50kg. Early unplanned EGB removal 2 out of 24 = 8%. Time to early unplanned EGB removal range 6 days to 6 weeks. All 2 who had early unplanned EGB removal were male. 0% of females and 40% of males having EGB had early unplanned EGB removal. All 2 early unplanned EGB patients reported excess (>10) takeaways and non-home cooked meals per week in BSQ. No other BSQ factors between both early unplanned EGB and completed EGB groups.

Conclusion

Despite a private self-funding, well-motivated cohort of patients who had all been interviewed by our Bariatric MDT and evaluated by BSQ, male patients who have pre procedure high takeaway and non-home cooked meals self-reported consumption have a greater incidence of requiring early unplanned EGB removal. These risk indicators will inform our future MDT practice to offer future potential similar patients added extra support. To alter and sustain take-away and non-home cooked meal choices as well as discussing any unrealistic patient targets prior to EGB insertion via off plan Bariatric specialist MDT support.

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INFLUENCE OF ONE ANASTOMOSIS GASTRIC BYPASS AND ROUX Y GASTRIC BYPASS IN NON-ALCOHOLIC FATTY LIVER DISEASE

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Background

Non-alcoholic fatty liver disease (NAFLD) is a pathology strongly associated with obesity and is considered the hepatic manifestation of the metabolic syndrome. It is found in a wide spectrum and can present as simple steatosis or progress to cirrhosis. Bariatric surgery is a therapeutic alternative for its remission. Among the various surgical techniques, the One Anastomosis Gastric Bypass (OAGB) has been increasingly used as an alternative to the already consolidated Roux-en-Y Gastric Bypass (RYGB).

Objectives

To analyze the effect of OAGB on non-alcoholic fatty liver disease, comparing it with the RYGB technique through intraoperative liver biopsies and non-invasive fibrosis scores.

Methods

Retrospective study conducted at the Obesity Outpatient Clinic of the Hospital das Clínicas da Unicamp, in which data from 43 patients who underwent bariatric surgery using the OAGB and RYGB technique were evaluated from 2017 to 2019. The project was approved by the Committee of Ethics in Research under the reference: 58184516.2.0000.5404. The characteristics of NAFLD (steatosis, steatohepatitis and fibrosis) were evaluated through histological examination of liver biopsies and fibrosis was correlated with non-invasive fibrosis score values.

Parcial results

In the evaluated period, 43 patients underwent single-anastomosis gastric bypass and were matched with 43 patients who underwent Roux-en-Y gastric bypass in the same period. The mean age at the time of OAGB was 37.51 years and 86.04% of patients were female. Liver biopsy during bariatric surgery showed that 48.83% had NASH, 23.25% had isolated steatosis and 46.51% had some degree of fibrosis. The mean fibrosis score was 0.698 preoperatively and 0.684 postoperatively. In Roux-en-Y Gastric Bypass, liver biopsy showed that 37.99% had NASH and 10.17% had isolated steatosis.

Conclusion

The OAGB technique is a commonly performed and safe procedure. Short-term results seem as promising as those observed in Roux-en-Y Gastric Bypass, so that the techniques were effective in promoting improvement in liver histology. However, there is still a need for further studies, especially randomized clinical trials.

P-193

INITIAL EXPERIENCE OF SINGLE ANASTOMOSIS TRANSIT BIPARTITION WITH SLEEVE GASTRECTOMY IN TAIWAN (SINGE CENTER)

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Background

Weight regain and insufficient weight loss after bariatric were still the main long term problems of pure restrictive procedure such as sleeve gastrectomy.

Objectives

Transit Bipartition with Sleeve Gastrectomy is the novel bariatric surgery with rising cases in recent years, currently reported as an acceptable primary procedure with comparable short & mid-term while compared to conventional gastric bypass surgery. We would like to share our initial experience and short term result of TG-SG.

Methods

From June 2022 to Dec 2022, 18 cases of TG-SG were performed as primary procedure for treatment of Morbid Obesity, Data including Operative time, hospital stays, TWL%(3m & 6m), complications & resolution of co-morbidity were collected.

Results

Mean operative time was 96 minute, mean hospital stays was 2.6 days. The average TWL% of 3 months ad 6 months were 11% and 26%, there was only one complication with E-loop stenosis who needed to re-operation. No mortality or leakage noted. Less De-novo GERD and better eating quality while compared to those with sleeve gastrectomy.

Conclusion

Single Anastomosis Transit Bipartition with Sleeve Gastrectomy is safe, effective procedure that can be considered as primary metabolic/bariatric procedure for treatment of morbid obesity.

P-194

INITIAL RESULTS OF A SAME DAY DISCHARGE PROTOCOL UTILISING REMOTE MONITORING FOR BARIATRIC SURGERY PATIENTS

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Introduction and background

Successful management of laparoscopic sleeve gastrectomy (LSG) and gastric bypass (GB) patients with same-day discharge (SDD) has been described in the USA and Europe with no safety concerns and high patient satisfaction. However, there are no published relevant UK studies, despite the significant experience with gastric band patients. We present our initial experience with a SDD protocol for bariatric surgery patients demonstrating its safety and feasibility in a UK NHS setting.

Methods

Patients undergoing LSG, GB or hiatus hernia repair (HH) were selected against agreed inclusion criteria to participate in the SDD programme. They were discharged to a pre-determined destination with a remote monitoring device. The patients returned to the hospital for review the following day.

Results

From September 2022 until March 2023 a total of seven patients were recruited in the programme (four GB, 2 LSG, 1 HH after SG). The mean weight was 124.74 kg and mean BMI 43.08 kg/m². Five patients were successfully managed with SDD. Remote monitoring was successfully implemented and no emergency intervention was needed. One patient was readmitted on postoperative day 1 during their scheduled review for nausea (post GB) and one patient stayed in the hospital for 3 days due to nausea (post LSG).

Conclusion

Bariatric surgery patients undergoing SG and GB can be safely managed with a SDD protocol utilising remote monitoring. Patient selection, prevention of postoperative nausea and management of patient expectations is critical for a successful outcome.

P-195

INITIAL US EXPERIENCE WITH SLEEVE GASTRECTOMY AND TRANSIT BIPARTITION; SINGLE-CENTER PROSPECTIVE FEASIBILITY STUDY IN PATIENTS WITH DIABETES AND BMI >35

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Background

The sleeve gastrectomy with transit bipartition (SG+TB), initially introduced by Santoro et. al., is a bariatric and metabolic procedure with significant neuroendocrine benefits especially in the context of diabetes. It maintains endoscopic access to the biliary tree, minimizes the nutritional complications seen after Roux-en-Y gastric bypass, and does not include permanent duodenal transection as required by a duodenal switch. The weight loss and metabolic benefits following this procedure have since been replicated at many other international centers, but it is not commonly performed in the US.

Objectives

The objective of this report is to describe the safety, technical aspects, and early efficacy in a cohort of patients undergoing sleeve gastrectomy with transit bipartition (SG + TB) at a single center by a single surgeon.

Methods

Under IRB approval, inclusion criteria included age >18, and BMI greater than or equal to 35 with a diagnosis of type II diabetes mellitus or a glycated hemoglobin (HbA1C) greater than 6.5% with or without pharmacologic management. Exclusion criteria included prior stapled bariatric surgery, type I diabetes, and tobacco dependence within the year prior to surgery.

Results

16 patients meeting inclusion criteria with ages 25-65 were consented to undergo SG + TB. In one patient, the transit bipartition portion of the procedure was aborted intraoperatively due to ileal adhesions. Preoperative HbA1C ranged from 5.9% to 12.2%, with an average reduction of 32.49% at 6 months postoperatively. Preoperative BMI ranged from 35-63 and average percent weight lost at 1 month after surgery of 8.99% of starting body weight. No major adverse events occurred in any patient.

Conclusion

Laparoscopic sleeve gastrectomy with transit bipartition is a safe and effective procedure in the management of patients affected by both obesity and diabetes and, in our experience, is less technically challenging than duodenal switch. Our short-term results are in agreement with the published international experience. Further investigation is needed to establish its benefits and risks in comparison to existing approaches. Recruitment is ongoing for a prospective comparison between SG + TB and RYGB alone with a larger sample size, and longer-term assessment of nutritional status following surgery.

P-196

INSULIN RESISTANCE IS THE MAIN CHARACTERISTIC OF METABOLICALLY UNHEALTHY OBESITY ASSOCIATED WITH NASH IN PATIENTS UNDERGOING BARIATRIC SURGERY

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Background

Metabolically healthy obesity (MHO) is a concept that applies to patients with obesity without any obesity-associated elements of the metabolic syndrome. Pathophysiologically, the factors of the metS can be divided into elements concerning inflammation, lipid and glucose metabolism and cardiovascular disease. MUHO patients appear to be at a greater risk of developing non-alcoholic steatohepatitis (NASH) compared to MHO patients.

Objectives

Aim of this study was to evaluate the influence of the different components of metabolically unhealthy obesity (MUHO) on NAFLD in patients with morbid obesity undergoing bariatric surgery.

Methods

141 patients with a mean BMI of 52.3 (36-74.8, SD 8.4) undergoing bariatric surgery from 09/2015 and 10/2021 at our university hospital were included in this study. Patients were evaluated pre-operatively for elements of the metS and MUHO (HOMA, CRP, BMI, fasting glucose, LDL, TG, HDL and presence of arterial hypertension). Intraoperatively, liver biopsy was taken from the left liver lobe. In ordinal regression analyses, the different factors were evaluated for their influence on NASH.

Results

Together, the parameters HbA1c, HOMA, CRP, BMI, fasting glucose, LDL, TG, HDL and the presence of arterial hypertension accounted for a significant amount of variance in the outcome, $p < 0.001$ for predicting presence of NASH. Only HOMA, $p = .007$ significantly independently predicted NASH. For the different subitems steatosis, activity and fibrosis according to Bedossa et al., parameters were evaluated independently. Evaluation of steatosis showed a similar trend ($p < 0.001$), independently significant predictors were HbA1c ($p = .015$) and HOMA ($p < .001$). The model was not significant for prediction of activity ($p = .122$) but showed statistical significance for predicting fibrosis ($p = .011$), with HbA1c as an independent predictor for fibrosis ($p = .005$).

Conclusion

The abovementioned model including parameters for diagnosis of MUHO was significant for predicting NASH in patients with morbid obesity undergoing bariatric surgery. The model was also statistically significant for predicting the subitems steatosis and fibrosis. Out of the different subitems, HOMA independently predicted presence of NASH and steatosis, while HbA1c independently predicted steatosis and fibrosis. Taken together, parameters of glucose metabolism appear to be more accurate for prediction of NASH than parameters of lipid metabolism, inflammation or presence of cardiovascular disease.

P-197

INTEGRATED APPROACH FOR PATIENTS WITH OVERWEIGHT AND OBESITY TREATED WITH SWALLOWABLE INTRAGASTRIC BALLOON

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Introduction

Results of the intragastric balloon (IGB), as well as those of surgery, require effective patient preparation and a multidisciplinary follow-up.

Objective

In our study, we analyzed the weight loss results of patients treated with a swallowable IGB, within a well-organized multidisciplinary program.

Methods

The multidisciplinary program begins 30 days before the placement of the IGB. Patient has two meetings with the nutritionist and, depending on his eating habits, receives the vibrating fork to start to control the way of eating. Before the placement procedure, patient meets the psychologist and the sport coach. Finally, the patient meets the neuro-training professional to help patient to learn relaxing technique and to highlight the causes behind the failures of previous weight loss attempts. For each patient a group chat is created. The patient is followed by the nutritionist and the doctor responsible for the IGB positioning. The coach follows the patients individually, remotely, every 15 days. The connected device (scale and smartwatch) give us a clear idea of protocol compliance for each patient.

Results

A total of 190 patients were enrolled in two different centres. The starting BMI was $33,3 \pm 5,3$ m/ Kg² with an average weight of 94.4 ± 20 kg. The gastric balloon was expelled about 105 days after its placement. At the time of elimination of the device, the average BMI was $29 \pm 4,7$ m/ Kg² with an average loss of $12 \pm 5,7$ kg and a %TBWL of $12.7 \pm 4.8\%$. Forty percent (n=76) of patients were followed through the internet platform even after expulsion, showing an increase of %TBWL to 16% about 7-8 months after the start of the program. We have no serious complications. The balloon required its removal prematurely due to intolerance in 4 patients, and spontaneous hyperinflation in 2 patients.

Conclusion

The positioning of IGB, when integrated in a multidisciplinary program, allows good weight loss with a small rate of complications. In addition, in patients who continue follow-up an additional weight loss was recorded, probably linked to a change in lifestyle and eating behaviors.

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INTERACTION BETWEEN PREOPERATIVE CO-MORBIDITIES AND SURGICAL OUTCOMES WITH TOTALLY ROBOTIC BARIATRIC SURGERY

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Introduction

Bariatric surgical candidates generally present with one or more major health issues, and multiple co-morbidities increase surgical risk. The robotic platform, with its three-dimensional visualization, wristed movement, presence of third instrumented arm, may be advantageous to conventional laparoscopy for performance of high-risk cases. Presently, there is limited information as to the role of preoperative co-morbidities on surgical outcomes with bariatric surgeries performed robotic.

Objectives

To investigate the association between incidence of medical comorbidities and perioperative outcomes following Roux-en-Y gastric bypass (RYGB) performed totally robotic (ROB) and to compare these findings to conventional laparoscopy (LAP).

Methods

The study included two groups of RYGB patients, those presenting with >major 3 co-morbidities (High-C, mean=4.08 co-morbidities, n=108 patients) and those with 0-2 co-morbidities (Low-C, mean=1.42 co-morbidities, n=138). Co-morbidities included obstructive sleep apnea, diabetes, hypertension, lipid abnormalities, heart disease, severe GERD on medications. RYGB was performed totally robotic using a da Vinci Xi robotic platform. Short-term surgical outcomes for both co-morbidity groups were compared following RYGB performed robotic (ROB, n=140) or laparoscopic (LAP; n= 117). Measurements were: 1) patient characteristics (age, BMI, gender), 2) operative (OP) times, 3) length of hospital stay (LOS), 4) 30-day readmissions, reoperations, and major complications.

Results

BMI and gender distribution were similar between the co-morbidity groups but patients with High-C were significantly ($p<0.001$) older. High-C vs. Low-C operative times did not differ but OP times were significantly lower ($p<0.01$) with the ROB vs. LAP approach for both groups (High-C ROB vs. LAP OP times = 117.2 min vs. 128.9; Low-C ROB vs. LAP times = 111.9 vs. 125.3 min). LOS was also significantly ($p<0.01$) less when RYGB was performed robotic (High-C ROB vs. LAP = 1.21 vs. 1.44 days; Low-C ROB vs. LAP = 1.14 vs. 1.30). RYGB 30-day complication rates performed laparoscopic were higher for patients with High-C vs. Low-C (8.9% vs. 4.0%). Robotic surgery reduced 30-day complication rates for both co-morbidity groups and to comparable rates, 2.5% High-C and 3.3% Low-C.

Conclusion

RYGB performed robotic versus laparoscopic reduces operative times, postoperative complications and LOS independent of number of preoperative co-morbidities.

P-199

INTERNAL HERNIA - POST RYGB

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Internal hernia is small bowel herniation through the defects in the inter mesenteric defects created when the Roux limb is mobilized to the newly created gastric pouch in a Roux En Y Gastric Bypass.

Clinical presentation may range from

1. mild and intermittent abdominal cramps
2. subacute small bowel obstruction
3. strangulation

In this oral presentation we want to present our series of few of the cases through videos.

Video 1 – How to close the mesenteric defect.

Video 2 – How to close the Pseudo Petersens defect.

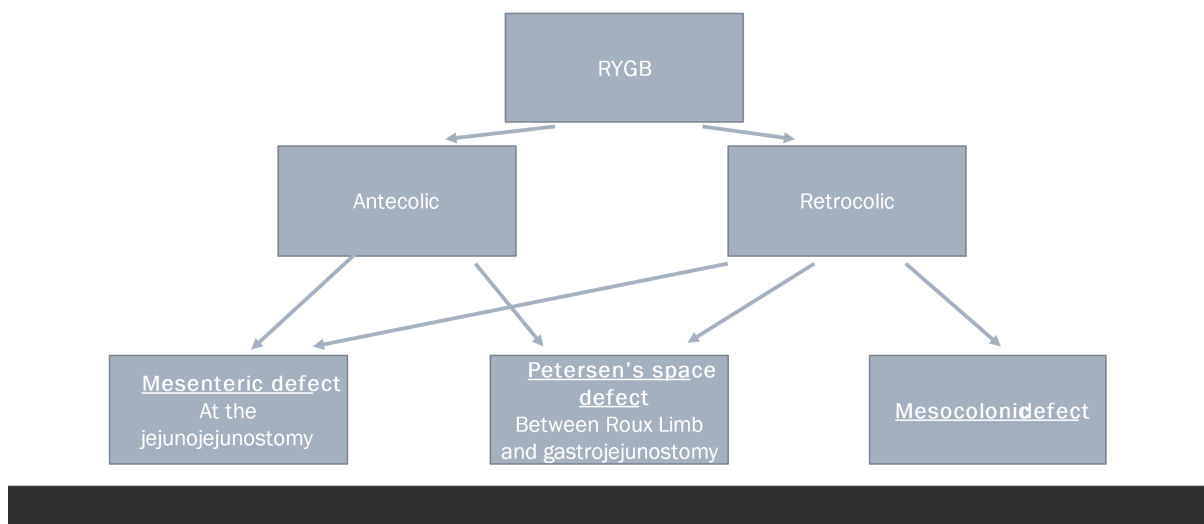
Video 3- internal hernia

Video 4- Internal Hernia

Video 5 – Internal Hernia

Video 6 – Internal Hernia

TYPES OF DEFECTS



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INTERNAL HERNIA POST-ONE ANASTOMOSIS GASTRIC BYPASS OAGBAbdulmenem Abualsei*King Hamad University Hospital, Abdulmenem Abualsei, Muharrq, Bahrain*

One anastomosis gastric bypass (OAGB) is now considered as the most common procedure done after sleeve gastrectomy worldwide and becomes alternative for Roux-en-Y gastric bypass (RYGB) but less incidence of internal hernia (IH). However, this complication is critical and need an emergency intervention to prevent bowel gangrene. but is it under reported in the literature.

Following malabsorptive procedures, IH continues to be a clinically significant complication.

The internal hernia which happened after OAGB is occurred in Peterson space mainly.

It is most common for patients to present with abdominal pain and nausea also other symptoms, and while a CT scan of the abdomen is the best initial diagnostic test, its sensitivity and specificity can be inadequate, but clinical suspicion is so important.

Here there are three cases series cases of internal hernia post status of OAGB out of around 1000 case.

P-201

INTERNAL HERNIAS IN TWO PREGNANT WOMEN AFTER GASTRIC BYPASS

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Objectives

Describe two cases of pregnancies complicated by internal hernias after gastric bypass.

Methods

During 2022 two patients were treated for internal hernia after gastric bypass at our particular hospital. The hospital records were retrospectively reviewed.

Results

Two women in age of 30 e 33, enter in the hospital with several abdominal pain, nausea and vomiting. In both cases the vital sings and laboratory values were normal. Gestational age was 32 and 28 weeks. The Median time from gastric bypass to pregnancy was 5 years. The first patient was submitted an exploratory laparotomy and another one was treated with a laparoscopic surgery. In both patients an internal hernia of the small bowel in the Petersen space was encountered. The patients give birth at 37 e 30 weeks, with cesarians deliveries by maternal, desire without any complications during the surgery. There was only 1 maternal postoperative complication, the woman that was submitted a laparotomic diagnostic develops an incisional hernia, that was fixed two months after birth.

Conclusion

The possibility of an internal hernia should always be considered in pregnant women with history of gastric bypass who present abdominal pain when they surch for medical assistance. Sometimes the diagnostic of internal hernia can be difficult in pregnancy women. That's why both obstetricians and bariatric surgeons must work together to diagnostic the internal hernia in pregnant women in order to prevent maternal and fetal death.

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INTESTINAL CYSTIC PNEUMATOSIS AS A COMPLICATION OF BARIATRIC SURGERY. DESCRIPTION OF A CLINICAL CASE AND REVIEW OF THE LITERATURE

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Consorci Sanitari Integral, Sant Joan Despí, Spain

Background

Intestinal pneumatosis can be associated with obstructive pulmonary, connective tissue, or gastrointestinal diseases. It is a rare entity that can cause pneumoperitoneum and sometimes even require emergency surgery.

Objective

Presenting a case of intestinal pneumatosis as a short-term complication of a bariatric surgery, in addition to reviewing the literature published.

Methods

Description of a rare complication of bariatric surgery and review of the scientific literature.

Results

A 49-year-old tracheostomized patient because of a prolonged admission on the intensive care unit (ICU) secondary to COVID-19 infection and with a history of metabolic syndrome, is referred to our unit to consider bariatric surgery. His maximum BMI was 46.2 kg/m² and a preoperative one of 40 kg/m². We considered suitable for the metabolic surgery and we proposed him to perform a laparoscopic duodenal switch (DS). On the 2nd postoperative day, he presented a septic shock due to failure of the duodeno-ileal anastomosis and required a reintervention to redo it. After that, he was admitted on the ICU. One week after, the patient persisted with high respiratory distress and there wasn't improvement. So, we performed an abdominal computed tomography (CT) which reported an extensive pneumoperitoneum without identifying the cause of it. We proposed a new reintervention to check the abdominal cavity. On the 3rd surgery, we did an exhaustive surgical revision and there wasn't any failure of intestinal anastomosis or perforations. The only finding was an extensive pneumatosis of ascending colon and cecum. We determined it as the cause of the pneumoperitoneum. After that, the patient was extubated on the 6th postoperative day and he was discharged with good oral tolerance after 2 weeks of admission.

Conclusion

In the available literature, there are few publications that link the appearance of pneumatosis as a complication of bariatric surgery. However, they are limited to case series that show the appearance of pneumatosis in long term jejunoileal bypass postoperative. To date, this is the first case reported in the literature on pneumatosis as a complication in the postoperative short period of bariatric surgery.

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INTRAGASTRIC BALLOON AS BRIDGING THERAPY PRIOR TO BARIATRIC SURGERY FOR HIGH SURGICAL RISK PATIENTS: EXPERIENCE WITH 496 CONSECUTIVE PATIENTS

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Background

Intragastric balloons represent an endoscopic therapy aimed at achieving weight loss by mechanical induction of satiety. Patients with BMI > 50kg/m² usually has a higher surgical risk, complications and risk of mortality. In addition, they frequently present difficulty managing associated diseases. The use of the intragastric balloon (BIB) is well established in the literature as an alternative for acute weight loss of patients with clinically severe obesity associated with control of decompensated comorbidities.

Objectives

To analyze the use of BIB as a preoperative procedure aiming an initial weight loss and reduction of surgical risk.

Methods

From November 2000 to January 2023, 496 patients with superobesity (mean BMI=52) were treated with the BIB for at least four months before surgical treatment. Associated severe grade diseases were arterial hypertension (55%), diabetes (25%), sleep apnea (65%) and osteoarthritis (45%).

Results

The mean percent excess weight loss was 25,2%, mean weight loss was 16.5kg and mean BMI reduction was 7,1 kg/m². BIB group had only minor complications (nauseas, vomits, gastroesophageal reflux) and three cases of early balloon withdrawal (within 2 months) due to patient intolerance. We found that 85% of patients showed satisfactory results with improvement in hypertension, diabetes, sleep apnea and with surgical risk reduction from ASA III/IV to ASA II. All these patients were submitted to bariatric surgery (RYGB 80%, LAGB 8%, SG 6% or BPD 6%) without major complications. There was no mortality. Only 15% of patients needed a two-stage surgery.

Conclusion

BIB is an effective non-surgical technique to prepare BMI > 50 patients, reducing the severity of major complications and changing surgical risk. Overall, IGB is effective as a bridging therapy with adequate procedural safety profile.

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INTRALUMINAL BLEEDING POST-ROUX-EN-Y GASTRIC BYPASS: EXPERIENCE REPORT

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Background

Intraluminal bleeding is a possible complication after a bariatric procedure, occurring mainly in gastrojejunostomy and gastric remnant stapling. It can lead to obstructive acute abdomen due to clot formation, occurring more frequently when high doses of heparin are used postoperatively.

Objective

Report the researchers' experience with a 49-year-old female patient with grade III obesity, whom was submitted to a Roux-en-Y gastric bypass, using usual dose of profilatic enoxaparin postoperatively.

Methods

This is a descriptive study, a case report type. The research site was a tertiary hospital located in João Pessoa - PB, Brazil. Relevant information for the case was collected during hospital stay.

Results

Intraoperative period occurred without complications, and the hemostatic revision was performed, excluding the presence of bleeding. The patient underwent postoperative treatment with 40 mg enoxaparin. Though it avoids the main complication of gastric bypass (deep vein thrombosis and pulmonary embolism), it could increase the occurrence of hemorrhagic complications, especially when high doses are used. After 1 day, the patient complained of brown reflux, abdominal pain in the epigastrium, right hypochondrium and left flank. Abdominal contrast-enhanced CT showed distension of the gastric remnant e the first portion of jejunum, suggesting luminal obstruction. Clots at the level of the enteroenteroanastomosis were suspected by the observation of unusual dense content after its topography. After the imaging findings, the patient underwent exploratory laparotomy, which showed distension of jejunum segment from the Treitz angle until the enteroenteroanastomosis without signs of folding, elbowing, or bridging. The anastomosis was undone, intraluminal clots were found and aspirated. A oversuture of the staple line was performed through the gastric remnant. Post operative follow up occurred without complications.

Conclusion

Though complications related to intraluminal bleeding are rare, they happen and carry the risk of dilation, perforation of the gastric remnant, and pancreatitis. Early diagnosis and intervention is essential in preventing serious outcomes.

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INTRA-OPERATIVE TRANEXAMIC ACID DECREASES INCIDENCE OF POST-OPERATIVE BLEEDS IN PATIENTS UNDERGOING SLEEVE GASTRECTOMY

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Background

Tranexamic acid (TXA) use is well-established in reducing surgical bleeding and is widely used in trauma and obstetrics. Within bariatric surgery, this practice is less well-established due to concerns surrounding venous thromboembolic disease (VTE). Equally, post-operative bleeding is a serious complication of bariatric surgery often requiring re-operation.

Objectives

This case-control study aims to compare 30-day outcomes post-sleeve gastrectomy in patients who received intra-operative TXA (March 2020 – July 2022) to those who did not (March 2011 – March 2020). The primary outcome was post-operative bleeding (Hb<9mg/dL, requiring blood transfusion and/ or re-operation). Secondary outcomes were incidence of VTE, serious post-operative complications (Clavien-Dindo>Grade 3) and death.

Methods

All cases were carried out by a single surgeon within the independent sector without staple line re-enforcement. In the TXA group, patients were given 1g TXA immediately following leak test. All patients received 2 weeks of prophylactic anticoagulation post-operatively.

Results

Results are as presented in the table below. No other serious complication was recorded in either group.

	TXA Group (n=226)	Non-TXA group (n=192)	P value
Demographics			
Age (years, mean +/- sd)	39.1+/-9.8	40.5+/-10.3	ns
Gender (M:F)	3: 223	18: 174	0.004
BMI (kg/m ² , mean +/- sd)	42.1+/-4.7	42.9+/-5.6	ns
VTE risk factors (%)	1.8	1.6	ns
ASA 2 (%)	79	74	ns
Outcomes			
Post-op bleed (n, %)	0, 0	3, 1.6	0.0279
PE/ DVT (n, %)	0, 0	0, 0	ns
Anastomotic leak (n,%)	1, 0.4	0, 0	ns
Death	0, 0	0,0	ns

Conclusion

Intra-operative TXA decreases post-operative bleeding in patients undergoing sleeve gastrectomy without increasing VTE risk.

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INTRA-OPERATIVE UNEXPECTED FINDINGS DURING BARIATRIC-METABOLIC SURGERY; DIFFICULT DECISIONS AND RECOMMENDED STRATEGIES

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Background

Annually approximately 240.000 patients undergo bariatric-metabolic surgery worldwide. Up to 2% in these cases an unexpected pathology is being identified, which could challenge the surgical team.

Objective

To review the potential unexpected pathologies, their incidence and giving guidance for surgeons about the best strategy to follow intra-operatively.

Methods

Retrospective review of the prospectively maintained departmental- and individual surgeons' database, identified 2502 primary bariatric-metabolic procedures, performed between April 2010 and Mar 2023.

Results

The most common findings were: N=17 (0.6%)

1. Newly diagnosed cirrhosis : 12 cases (0.47%). Intra-operative surgical biopsy could facilitate the correct diagnosis, prevent to perform percutaneous liver biopsy and it is recommended to proceed with surgery.
2. GIST: 2 cases (0.08%). Despite the pre-operative mandatory upper GI endoscopy, the gastro-intestinal stromal tumor can present on the stomach- or small bowel surface. If the location is not at the gastro-oesophageal junction, and the size is <2 cm; surgical in toto resection, without regional lymphadenectomy was recommended.
3. Intestinal malrotation: 2 cases (0.08%).
4. Malignant ovarian cyst: 1 case (0.04%)

Conclusion

Unexpected pathology could occurred 0.6% of our primary bariatric-metabolic surgical cases, and in this video- presentation we show the best strategies to manage them, mitigate risk and avoid complications but also avoid unnecessary on-table cancellation.

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IS ROUTINE PRE-OPERATIVE GASTROSCOPY NECESSARY FOR ALL PATIENTS UNDERGOING BARIATRIC SURGERY?

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Background

Routine gastroscopy before bariatric surgery has a considerable cost both in terms of staffing and resource requirement. There is considerable debate as to whether the benefit gained outweighs this requirement.

Objectives

This study aims to determine the yield of abnormal endoscopic findings in order to aid clinicians in assessing the value of routine pre-operative gastroscopy in their practice.

Methods

A patient list was generated from the local database at a single large bariatric unit. Inclusion criteria were all patients undergoing gastroscopy between 2018 and 2022 with 'Bariatric pre-assessment' recorded in the requesting details. Data on demographics, patient self reported symptoms, and endoscopic findings were recorded. Categorical variables were analysed using the Chi squared test.

Results

A total of 642 patients were identified, 146 male and 496 female. Median age was 45 and median BMI 44.85. Our study did not identify any Gastro-Intestinal Stromal Tumours (GISTs) or malignancies. 313 (48.7%) of patients had self-reported reflux symptoms prior to OGD. Hiatus hernias were found in 252 (39.3%) of patients, and 52 (8.1%) had oesophagitis above LA grade B. There was no statistically significant correlation between GORD symptoms and findings of hiatus hernia over 2cm ($p=0.14$), oesophagitis above LA grade B ($P=0.31$), or Barrett's oesophagus ($p=0.43$).

Conclusions

Clinicians considering routine preoperative screening for incidental malignancies or GISTs may find our results reassuring. Those performing endoscopy to aid in surgical decision making should bear in mind that we have not been able to demonstrate any significant correlation between self-reported reflux symptoms and abnormal findings at endoscopy.

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IS THERE ANY BENEFIT IN PERFORMING OMENTOPEXY DURING LAPAROSCOPIC VERTICAL GASTRECTOMY?

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Background

Metabolic surgery has been demonstrated to be an effective obesity treatment; the laparoscopic gastric sleeve (LGS) is the most popular procedure, and omentopexy (OP) is one of many options supposed to decrease associated complications of LSG.

Objectives

To evaluate omentopexy's effectivity in controlling post-operative symptoms and to determine the need for re-intervention, leakage, hemorrhage, and mortality in patients that underwent LSG.

Methods

This prospective, experimental, non-randomized study included 105 patients, grouped as omentopexy (OP) (53) or no omentopexy (NO OP) (52); it was conducted from July 2022 to March 2023, with one surgeon in each group. Variables such as 24hrs post-operative symptoms, bleeding, leakage, re-intervention, and mortality were evaluated.

Results

Groups were demographically comparable, evaluated with a Student's t for independent samples: mean age for OP was 38.8 ± 9.5 SD vs. 38.8 ± 11.2 SD for NON OP ($p=0.976$); BMI 40.5 ± 7.7 SD vs. 42.5 ± 7.8 SD ($p=0.195$), mean weight 116.9 ± 18.5 SD vs. 121.6 ± 24.7 SD ($p=0.303$) respectively; by gender, OP were 90.56 % (48) women vs. 9.43% (5) men, in NON-OP group 84.61% (44) vs. 15.38% (8) ($p=0.236$). Comorbidities were evaluated without finding significant differences, using a chi-square test with Fisher adjustment for being dichotomous variables: diabetes mellitus 2 ($p=0.611$), systemic arterial hypertension ($p=0.999$), dyslipidemia ($p=0.087$), psychiatric disorders ($p=0.839$), obstructive sleep apnea syndrome ($p=0.661$), asthma ($p=0.999$), fatty liver ($p=0.431$) and anesthetic risk (ASA) ($p=0.12$) (Mann Whitney). A 24-hour symptom questionnaire (Likert scale) was applied, where vomiting ($p=0.403$), nausea ($p=0.107$), dysphagia ($p=0.795$), regurgitation ($p=0.613$), heartburn ($p=0.381$), abdominal pain ($p=0.134$) and chest pain ($p=0.547$) were investigated, there was no significance when evaluated with the Mann Whitney test because they were ordinal measures. There were no bleeding, leakage, or mortality cases in any group, but one patient in the OP group was intervened for stenosis, which was insignificant.

Conclusion

Omentopexy is not effective in controlling 24hrs post-operative symptoms and does not give any benefit in terms of bleeding, leakage, re-intervention, and mortality when compared with LSG.

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KNOWLEDGE, ATTITUDE AND PRACTICE OF AMBULATORY SLEEVE GASTRECTOMY: A NATIONAL SURVEY AMONG CHINESE BARIATRIC SURGEONS

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Background and Objectives

The ambulatory sleeve gastrectomy(ASA) has become a hot topic in western bariatric community, but few people seem to be interested in it in Asia. The purpose of this study is to investigate the knowledge, attitude and practice of ASA in China.

Method

A questionnaire developed based on literature review and expert consensus was collected by sending to 2 bariatric groups (WeChat group) whose members are Chinese bariatric surgeons.

Result

119 questionnaires were analyzed. Although the majority(73.1%) bariatric surgeons know about ASA, 78.2% of them have never carried out ASA. Safety concerns and a lack of relevant team support were the most common reasons why they did not carry out ASA. Nevertheless, 65.6% of them would like to or very willing to try ASA. 21.8% bariatric surgeons had performed ABS and most of them(84%) believed that ASA was safe and effective, while 64% surgeons believed that not all patients were suitable for ASA. However, all of them agreed that ASA was acceptable for strictly selected patients. The vast majority of people have not had ambulatory gastric bypass surgery or same-day bariatric surgery(80.8% and 84.6%, respectively).

Conclusion

This study highlights that in China, most bariatric surgeons do not perform ASA, but are willing to try it. Safety concerns and a lack of relevant team support are the most common reasons for hindering ASA. These findings suggest that relevant team building, thorough patient selection and discreetly safety exploration may contribute to the development of ASA.

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LAPAROSCOPIC BARIATRIC SURGERY LEARNING CURVE: AN ANALYSIS OF PROCEDURE VOLUME AND OUTCOMES BASED ON A SURVEY AMONG YOUNG ASIAN SURGEONS

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Background

Laparoscopic bariatric surgery is a safe and effective treatment for obesity and its comorbidities. However, the learning curve for laparoscopic bariatric surgery can be steep, and there is a need to evaluate the impact of surgical experience on patient outcomes.

Objective

This study aimed to evaluate the laparoscopic bariatric surgery learning curve among young surgeons in Asia by analysing their experience and skill development through a questionnaire survey. The study assessed the relationship between procedure volume, surgeon confidence, and patient outcomes, including complications, readmission rates, mortality rates, and length of hospital stay.

Methods

A cross-sectional study was conducted through a questionnaire survey of young surgeons in Asia who had recently completed laparoscopic bariatric surgery training programs. The survey collected data on their experience and skill development in laparoscopic bariatric surgery, including procedure volume, the number of cases performed, and the level of confidence in performing the procedure. The survey also collected data on patient outcomes, including complications, readmission rates, mortality rates, and length of hospital stay.

Results

A total of 122 young bariatric surgeons completed the survey. The results showed that surgical experience, as measured by procedure volume and surgeon confidence, had a significant impact on patient outcomes in laparoscopic bariatric surgery. Consecutive 25-35 cases are required to reach an improvement of surgical skills with less complication rates. Higher procedure volumes and greater surgeon confidence were associated with lower complication rates, lower readmission rates, lower mortality rates, and shorter length of hospital stay.

Conclusion

This study provides valuable insights into the laparoscopic bariatric surgery learning curve among young surgeons in Asia and the impact of surgical experience and skill development on patient outcomes. The results suggest that higher procedure volumes and greater surgeon confidence are associated with improved patient outcomes in laparoscopic bariatric surgery. These findings highlight the importance of enhancing the training and education of young bariatric surgeons to improve patient outcomes and ensure the continued success of laparoscopic bariatric surgery as a safe and effective treatment for obesity and its comorbidities.

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LAPAROSCOPIC GASTRIC PLICATION: A LONG-TERM FOLLOW-UP AND COMPARISON OF OUTCOMES IN SEVERE VS. NON-SEVERE OBESITY

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Background

Laparoscopic gastric greater curvature plication (LGGCP) is a restrictive technique that does not need gastrectomy. This study aims to elucidate the long-term efficacy of LGGCP.

Methods

This is a retrospective cohort study performed on patients who underwent LGGCP between 2010 and 2019 at a single tertiary center. The patients were routinely visited 3, 6, 12, 24, and 60 months after surgery.

Results

Ninety-four patients with obesity were included in the study. The mean five-year postoperative BMI was 32.00. Excess weight loss (EWL): 30%-50% and EWL<30% occurred in 16 and 9 cases, respectively. The mean EWL was higher at 3-, 6-, and 12- months post-operation in patients with a BMI<40. Weight regain was 46.3% at the five-year follow-up. Eighty-seven patients had associated comorbidity, and 76 had improved in at least one of their comorbidities. Sixteen patients (17.0%) experienced complications.

Conclusion

The LGGCP is a potential safe and effective bariatric technique that seems to have more benefits in patients with obesity who have a BMI<40. Thus, we suggest the usage of LGGCP, especially in this group of patients, due to its less-invasive nature and acceptable cost-benefit. Further studies with a larger sample size must be performed to validate these results.

Keywords: laparoscopy, gastric plication, bariatric surgery, obesity surgery.

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LAPAROSCOPIC ONE ANASTOMOSIS GASTRIC BYPASS (OAGB) MINI GASTRIC BYPASS (MGB) EARLY (=30 DAYS) COMPLICATIONS - DIAGNOSIS AND MANAGEMENT

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Introduction

One Anastomosis Gastric Bypass (OAGB)/ Mini Gastric Bypass (MGB) is now a recognised mainstream bariatric procedure being adopted by an increasing number of surgeons. Though OAGB-MGB has a lower complication rate, these patients require special attention in the early postoperative follow-up, given the more frequent medical comorbidities.

Objective

Early diagnosis and appropriate treatment of these complications are directly associated with greater control probability.

Results

The incidence of early complications was primarily clinical, based on signs and symptoms such as pain, vomiting, bleeding, fever, tachycardia, and tachypnoea. The value of the clinical signs, especially in cases of sepsis, and early treatment, sometimes at the expense of complementary exams, was essential to the favourable outcome of the surgical complications. The incidence of early complications was low. None of the complications led to mortality, and they were medically manageable. We evaluate the experience and early postoperative follow-up in a large cohort of patients for laparoscopic OAGB-MGB performed at a single institution.

Conclusion

The rate of 30 days postoperative complications is progressively lower after OAGB-MGB. Selection of candidates for OAGB-MGB and surgeon procedure performance are essential benchmarks for low early and postoperative complication rates. Better resolution of metabolic syndrome can be achieved with OAGB-MGB.

Keywords: Laparoscopic One Anastomosis Gastric Bypass (OAGB); Mini Gastric Bypass (MGB); Early complications; Diagnosis and Management.

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LAPAROSCOPIC ROUX EN-Y GASTRIC BYPASS AFTER FAILED VERTICAL BANDED GASTROPLASTY: TWO YEARS FOLLOW UP OF 102 PATIENTS

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Background

Vertical banded gastroplasty (VBG) is now discarded from being a restrictive procedure for morbid obesity due to its many drawbacks, doubtful efficacy and lots of post-operative complications. Roux en-Y gastric bypass (RYGB) is the most commonly performed procedure for VBG revision. So we aimed at reporting our experience in conversional RYGB for a failed VBG.

Material and Methods

Analyzing follow-up records of 102 patients who underwent revisional RYGB after failed VBG in the period from April 2014 to January 2018.

Results

A total of 102 laparoscopic revisions of failed VBGs to RYGB were performed. The mean operating time was 161.9 mins \pm 29.2 and the mean length of the hospital stay was 1.5 days \pm 1.2. Fourteen patients (13%) developed early post-operative complications (gastrojejunostomy leak 5; bleeding 9). Four patients (4.7%) developed late complications (Port site hernia 2; internal hernia 1; Stomal ulcer 1). The mean BMI pre-RYGB was 46.6 ± 5.9 kg/m², the mean %EBWL (percent excess body weight lost) of the patients at 12 and 24 months post-revision were 56.2% and 64.3%, respectively. Our patients had immediate post-revision resolution of VBG-related complications like dysphagia and vomiting. We also report improvement in all Obesity related health problems with (75.7%) complete remission rate and (24.3%) partial remission or improvement rate of diabetes mellitus.

Conclusion

Conversion of VBG to RYGB is a feasible procedure and is associated with acceptable early morbidity rates and reduced lengths of hospitalization also it provides acceptable weight loss and improvement in obesity-related health problems.

Keywords: Roux-en-Y gastric bypass, vertical banded gastroplasty, Laparoscopy, Re-operation, Bariatric surgery

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LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS AFTER CARDIAC TRANSPLANTATION

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The Roux-en-Y gastric bypass is one of the most common weight-loss performed procedures, corresponding to 18% of bariatric surgery operations. The weight gain is common in patients after cardiac transplantation. Obesity increase morbidity and mortality after organ transplantation increasing complications related to delay of graft function.

This is a 45 years old masculine with a history of high blood pressure and heart failure secondary to ischemic cardiomyopathy treated by cardiac transplantation 5 years ago and Class one obesity with a 33.2 body mass index, refractory to hygienic dietetic measures.

Currently asymptomatic. The examination was normal. The clinical laboratories were normal. As protocol to cardiac transplanted patient, tacrolimus level was 8.58 ng/mL.

Laparoscopic Roux-en-Y gastric bypass (LRYGB) was performed.

The stomach dissected at the lesser curvature with ultrasonic energy, performing the gastric pouch of 30 mL by an endostapler, the sectioned area was reinforced with an absorbable suture. The gastro-jejunal anastomosis was done with an alimentary loop to 120 cm and the biliopancreatic loop to 120 cm. The enterotomies were closed with absorbable suture. The mesenteric gap and the Petersen space were closed with non-absorbable suture. The leak probe with methylene blue was negative.

The post-operative course was satisfactory, and the patient was discharged without eventualities.

Bariatric surgery is a valid and superior in comparison with nonsurgical treatment for control of comorbidities in patients after cardiac transplantation. Improving quality of life, weight loss and survival.

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LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS: PRIMARY PROCEDURE OF CHOICE FOR MORBIDLY OBESE PATIENTS, 6 YEARS FOLLOW UP OUTCOMES – A SINGLE CENTRE STUDY IN UAE

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Background

We want to present our long-term outcomes of Laparoscopic Roux-en-Y gastric bypass (LRYGB) performed in our centre.

Introduction

Many newer bariatric surgery procedures coming up with time with variable results. we still believe Roux-en-Y the best among all bariatric procedures with sustainable efficacy.

Objectives

To demonstrate the perioperative safety and medium-term efficacy of the Roux-en-Y gastric bypass procedure between 2012 to 2016 on morbidly obese patients of UAE in Dubai hospital bariatric surgery center.

Method

Retrospectively collected data of 250 (F:M=177:73) patients who underwent gastric bypass as primary bariatric surgery in our center. The patient's characteristics, perioperative result, early and midterm outcome in term of resolution or improvement in comorbidities were analyzed.

Result

Initial 250 patients were followed up for 6 years and their %EWL, BMI loss, resolution of co-morbidities were recorded. the mean BMI reduced from 46.89 kg/m² pre- op, reduced to 32.48 kg/m² at 1 year and 27.32 kg/m² at 3 year post op period. At 6 years 42 patients found to gained 16% of weight from nadir. complete resolution of DM, HTN and GERD was noticed in 58.8%, 55.4% and 70% patients respectively during first post op year. Dyslipidemia improved in 68% patients. OSA, Back pain Improvement in 85%, 76% respectively. Improvement in quality of life in 87% patients. Two post-operative bleeding managed conservatively. There is no leak and zero mortality in the study period.

Conclusion

LRYGB is a safe and effective bariatric procedure and still considered as gold standard bariatric procedure of choice.

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LAPAROSCOPIC SLEEVE GASTRECTOMY COMBINED WITH INTRAOPERATIVE ENDOSCOPY. LESSER CURVATURE SHORTENING AXIS HOLDING METHOD FOR STABLE STAPLING TECHNIQUE

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Background

Laparoscopic sleeve gastrectomy involves multiple stapling cartridges to dissect the stomach, which may cause stenosis and twisting, so it is important to perform stable stapling in order to perform the operation safely. Since the bougie, which is generally used as a staple guide, is flexible, the tip position may not be stable in the lumen and it may be difficult to detect the localization. Therefore, we perform laparoscopic sleeve gastrectomy with an intraoperative endoscope.

Methods

Laparoscopic operation is performed by the general 5-port method. An oral endoscope is inserted after performing omental incision, dissection around the cardia and posterior of stomach including gastro-pancreatic fold and of passiveness of the fornix. Using an endoscope with an outer diameter of 9.9 mm, the tip is proceeded to the descending duodenum, and the cardia is straightened from the pylorus by a shortening operation, so that the lesser curvature line can be reliably secured. Furthermore, since the fiber itself serves as an axis and appropriate counter traction is applied in the lesser curvature direction during the stapling and stable stapling is possible. Different from a single-use bougie, using an endoscope has the advantage of saving medical materials and material costs. This method is also preferable as a sustainable surgical procedure.

Results

This method has been performed on 6 cases. The average of operative time is 148 minutes including reinforcement staple suturing. The amount of intraoperative blood loss is less 5ml in all cases. No postoperative complication occurred with this method.

Conclusion

we show, herein, our results of laparoscopic sleeve gastrectomy and present a surgical technique for stable stapling using intraoperative endoscopy with lesser curvature shortening axis holding method.

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LAPAROSCOPIC SLEEVE GASTRECTOMY VERSUS LAPAROSCOPIC SINGLE ANASTOMOSIS SLEEVE ILEAL (SASI) BYPASS IN SURGICAL MANAGEMENT OF MORBID PATIENTS WITH OBESITY

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Objectives

The aim of this study was to compare short term outcomes of Laparoscopic sleeve gastrectomy (LSG) versus laparoscopic Single Anastomosis Sleeve Ileal (SASI) Bypass in Management of Morbid Obese Patients.

Methods

This was a prospective study performed on 50 morbid patients in the Department of General Surgery, Tanta University Hospital, during the period from March 2019 to March 2021. The study populations were randomly divided into two equal groups, group I & II subjected to LSG and SASI respectively. Patients were followed up at 1, 3, 6, 12 months. Operative time, length of hospital stays, Excess weight loss percentage (EWL %), comorbidites improvement or resolution, postoperative complications and mortality were evaluated and compared between the 2 group.

Results

There was no statistical significance difference regarding Age, gender, and mean preoperative BMI between both groups. The mean operative time for LSG was 42.2 ± 11.32 min and that for SASI was 76.23 ± 14.22 min; the 1 year EWL% was $69.3 \pm 5.48\%$ for LSG and $80.1 \pm 2.3\%$ for SASI. There was no statistical significance difference between both groups regarding comorbidities improvement except for type 2 diabetes mellitus, which showed a significant higher resolution rate after SASI. There was no perioperative mortality however, the overall morbidity rates were higher in SASI groups.

Conclusion

SASI is superior to LSG regarding EWL% at different follow up periods however morbidity rates were also higher and longer operative time.

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LAPAROSCOPIC VERTICAL CLIP GASTROPLASTY: FOLLOW-UP AND SHORT TERM RESULTS

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Background

Laparoscopic Vertical Clip Gastroplasty (LVCG) is a recently applied procedure; It mimics the principle of the gastric sleeve but using a reversible mechanism, having the ability to restrict oral intake without the need for resections, with a reported weight loss similar to that obtained with the gastric sleeve.

Objectives

Show the short-term results of patients treated at Innovare Bariatrics with LVCG.

Methods

A retrospective observational study of patients who underwent LVCG from March to August 2022 was carried out, obtaining a total of 10 patients between 31 and 60 years old with 6-month follow-up. The following were evaluated: pre-surgical weight, height and body mass index, at 30, 90 and 180 days post-surgery, in addition to the percentage of excess weight lost at 6 months.

Results

Mean age of 48 years was obtained, with a female predominance 60%. A greater weight loss was observed in the first post-surgical trimester, obtaining an average weight loss of 11.5kg with a maximum loss of 18kg and a minimum of 9kg, particularly the greatest loss was recorded in the first post-surgical month with an average of 6.9kg, with a maximum loss of 11kg and a minimum of 4kg. During the second trimester an average weight loss of 3.5kg was obtained. The average kilograms lost at 6 months was 14.6kg with a maximum of 20kg and a minimum of 11kg. In relation to the percentage of maximum excess weight loss at 6 months in our study population it was 59.6% and a minimum of 31% with an average of 43.54%. Only 30% of this population reached a percentage of excess weight loss greater than 50%.

Conclusions

LVCG is a reversible bariatric procedure and an option for patients who do not wish to expose themselves to resections, as well as for elderly patients. According to the results obtained in this study, the use of this technique can generate variable results in terms of weight loss and percentage of excess weight loss, and may not be as effective compared to other bariatric procedures.

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LAPAROSCOPY-ASSISTED TRANSGASTRIC ENDOSCOPIC RETROGRADE CHOLANGIOPANCREATOGRAPHY (LATERCP) AFTER MINI GASTRIC BYPASS SURGERY

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Background

Laparoscopic gastric bypass is a popular bariatric procedure performed worldwide. It entails the exclusion of the stomach and duodenum that makes access to the biliary tree through transoral route via endoscopic retrograde cholangiopancreatography (ERCP) difficult. Patients that undergo bariatric surgery are predisposed to developing cholelithiasis in the post-operative period especially due to the sudden rapid weight loss.

Objective

To describe the technique of laparoscopic assisted transgastric ERCP (LATERCP) in managing biliary obstruction after one-anastomosis gastric bypass (OAGB).

Methods

We present six cases of LATERCP performed for patients that came with biliary obstruction post Laparoscopic OAGB.

Results

All patients were successfully managed using a minimally invasive approach followed by improvement of their biliary obstruction after which they were safely discharged within a period of 1 to 2 days.

Conclusion

LATERCP is one of the modalities that allows access to the biliary tree after a gastric bypass. It is a relatively minimally invasive approach that has high success rates.

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LEARNING CURVE OF GASTRIC CANCER EXPERT SURGEON IN BARIATRIC SURGERY: ANALYSIS OF 85 CONSECUTIVE LAPAROSCOPIC SLEEVE GASTRECTOMY CASES

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Background

Intraabdominal organs which are manipulated in bariatric surgery are very familiar with gastric cancer surgeons.

Objective

This study is aimed to assess the learning curve of gastric cancer surgeon for bariatric surgery.

Methods

Initial consecutive cases of single surgeon with more than 1000 cases of gastric cancer surgeries were enrolled in this study. The short-term results including operation details and postoperative complication were analyzed.

Results

A total 85 consecutive laparoscopic sleeve gastrectomy cases were done from 2019 to 2022. Among them, three cases were performed with removal of adjustable gastric band. The mean age of 85 patients was 36.1 ± 9.7 and the number of female patients was 54 (63.5%). The mean BMI was 40.9 ± 6.1 . The mean values of estimated blood loss and hospital stay after surgery were 20.5 ± 37.7 cc and 3.3 ± 0.5 days, respectively. There were no complications for postoperative leakage, bleeding and passage disturbance. No mortality was reported. The mean operation time for three cases of sleeve gastrectomy with adjustable band removal were 168.3 ± 2.8 minute. In 82 sleeve gastrectomy cases, the mean operation times was 108.4 ± 26.0 minute and the time to make a plateau for operation time was around the 30 case.

Conclusion

The learning curve of gastric cancer expert surgeon is excellent when performing bariatric surgery, especially sleeve gastrectomy.

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LEVEL OF EVIDENCE OF GUIDELINES FOR BARIATRIC SURGERY: EVALUATION USING THE APPRAISAL OF GUIDELINES FOR RESEARCH AND EVALUATION II TOOL

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Background

In recent years, the number of guidelines published for provision of bariatric surgery as a treatment for severe obesity has sharply increased. However, the quality of these guidelines remains unknown, leaving providers with some degree of uncertainty when using them to make perioperative management decisions.

Objective

This study aims to evaluate the quality of existing guidelines for the perioperative care of bariatric surgery patients.

Methods

A comprehensive search of MEDLINE, EMBASE, and grey literature was conducted from database inception to October 2022 for bariatric clinical practice guidelines in compliance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. Guideline evaluation was carried out using the Appraisal of Guidelines for Research and Evaluation II (AGREE II) framework.

Results

The initial search yielded 1,483 citations, of which, 42 were included in final analysis. Of the included studies, 25 (59.5%) were guidelines, 10 (23.8%) were position statements, and 7 (16.7%) were consensus statements. Most guidelines originated from the American Society of Metabolic and Bariatric Surgery (n=5), and the International Federation for the Surgery of Obesity and Metabolic Disorders (n=4). Intra-class coefficient of AGREE II scores were greater than 0.9, indicating high consistency among raters. The overall median (IQR) domain scores for all studies were: 1) scope and purpose: 89% (55.5%-93.5%), 2) stakeholder involvement: 49% (38.5%-64.5%), 3) rigor of development: 38% (19.5%-58%), 4) clarity of presentation: 85% (76%-90%), 5) applicability: 7% (3-23%), 6) editorial independence: 50% (48%-64.5%), 7) overall impressions: 46% (31%-60.5%). Only five guidelines achieved an overall score greater than 70%. Consensus and position statements received lower scores in all domains compared to guidelines, with none having an overall score greater than 70%.

Conclusion

Existing bariatric surgery guidelines effectively outlined their aim and target population, and clearly presented recommendations. However, many did not adequately seek patient input, state search criteria, use standardized evidence rating tools, and consider the resource implications of guideline application. Future guidelines should focus on sufficiently stating methodology, clearly differentiating guidelines from position statements, and using referencing the AGREE II framework in study design to ensure the highest quality of evidence-based bariatric care.

P-222

LIRAGLUTIDE EFFECTIVENESS IN PREOPERATIVE WEIGHT-LOSS FOR PATIENTS WITH SEVERE OBESITY UNDERGOING BARIATRIC-METABOLIC SURGERY

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Background

Severe obesity is associated with considerable reduction of wellbeing and life expectancy. People living with severe obesity tend to die 8 to 10 years earlier. Preoperative management of patients living with severe obesity can be challenging and proper weight-loss may help obtain better outcomes and less morbidity. We evaluated the effectiveness of GLP-1 analogue Liraglutide in preoperative weight-loss.

Objective

Determine liraglutide effectiveness for preoperative weight-loss in patients with severe obesity undergoing bariatric-metabolic surgery.

Methods

We did a single center, quasi-experimental prospective before-and-after study. Eligible participants were adults (>18 years) in preoperative preparation for bariatric-metabolic surgery with body-mass index ≥ 48 kg/m². All patients were assigned the same pharmacological treatment with liraglutide, initiating dosing with 0.6 mg per day escalating 0.6 mg every week up to 3.0 mg. The treatment dose was delivered once daily via subcutaneous injection for 3 months (12 weeks). Weight-loss and percentage weight-loss was evaluated monthly using bioelectric impedance (BIA) final result at week 12. We analyzed data using descriptive statistics, central tendency measures and dispersion for quantitative variables and absolute and relative frequencies for qualitative variables. The inferential with Chi-square, Student's T or Mann Whitney's U according to normality, by means of significance of $p < 0.05$; with the statistical package SPSS v25.0.

Results

37 individuals were included between July and October 2022, mean initial characteristics included 28 (76%) female and 9 (24%) males, with an average age of 44 years, 19 patients (51%) were in the range of grade IV obesity, 10 (27%) in grade III and 8 (22%) in grade V obesity; with an average BMI of 56.04 kg/m². The mean initial weight was 147.4 ± 14.9 kg decreasing after 3 months of administration of liraglutide to 139.3 ± 16.8 ; $p < 0.000$, 35 patients included in the study had some degree of weight loss (94.6%) only 2 (5.40%) had no variation in their weight; achieving a 5.46% average loss in 3 months of treatment.

Conclusion

Liraglutide proved to be effective as adjuvant therapy for preoperative weight loss in patients with severe obesity.

P-223

LONG TERM EFFECTS OF METABOLIC AND BARIATRIC SURGERY ON PSEUDOTUMOR CEREBRI

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Background

Pseudotumor cerebri (PTC) is a rare disorder that is linked to severe obesity. Aim of this study was to evaluate long-term effect of metabolic and bariatric surgery (MBS) on PTC outcomes.

Methods

A retrospective study including patients with PTC and severe obesity who underwent MBS. Data were retrieved from prospectively maintained databases of two bariatric surgeons.

Results

The cohort included 13 patients, of them 12 women. The median age was 36 (interquartile range; IQR 21,47) years and body mass index (BMI) was 40.4 (IQR 37.8,41.8) kg/m². All patients had visual disturbance due to PTC, 12/13 patients had headaches, and 12/13 had tinnitus. The mean opening pressure on lumbar puncture was 45 cmH₂O, and 11/13 patients had papilledema. Medications for PTC were consumed by 11/13 patients, and 2/13 patients had prior surgical intervention for PTC. MBS types included sleeve gastrectomy (n=7), adjustable gastric banding (n=2), roux-en-y gastric bypass (n=2), one anastomosis gastric bypass (n=1), duodenal switch (n=1). At a median follow-up of 10 years (IQR 8,13), the median BMI and total weight loss were 29.7 kg/m² and 27%, respectively. PTC symptoms resolved in 9/13 patients, improved in 12/13 patients, and 2/13 patients were still receiving PTC medications.

Conclusions

MBS results in significant and sustainable weight loss, with subsequent resolution or improvement of PTC. It may be considered as a preventive measure for PTC in patients with severe obesity.

P-224

LONGITUDINAL ANALYSIS OF A WEIGHT LOSS PROGRAM COMBINING AURICULAR ACUPUNCTURE STIMULATION AND NUTRITIONAL SUPPLEMENTS

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Background

In Japan, a method for weight loss using auricular acupuncture stimulation with beads and nutritional supplements has a history of over 30 years. Auricular stimulation is believed to improve resilience to food cravings and has been used in drug addiction recovery programs worldwide. In our previous study, we instructed women (n=1362) to halve their meals and added auricular acupuncture stimulation, resulting in an overall weight loss of 11.15% in three months.

Objectives

The aim of this study was to investigate the effects of auricular acupuncture stimulation, nutritional supplement intake, and their combination on weight loss.

Methods

We conducted a 30-day diet program for 110 Japanese men and women in their 20s to 60s who desired to lose weight. Participants were divided into four groups: both auricular acupuncture stimulation and nutritional supplements, auricular stimulation only, nutritional supplements only, and neither. Body composition was measured twice a week using a body composition analyzer.

Results

The daily weight change in each group was -0.08 (95% CI = -0.10 to -0.06) for the group receiving both auricular acupuncture stimulation and nutritional supplements, -0.06 (95% CI = -0.08 to -0.04) for the auricular stimulation only group, -0.05 (95% CI = -0.07 to -0.03) for the nutritional supplements only group, and -0.03 (95% CI = -0.05 to -0.01) for the control group with neither intervention, showing a significant difference between groups. The group receiving both interventions had the greatest weight loss effect. Additionally, a significant interaction effect was found for auricular stimulation (-0.3; 95% CI = -0.05 to -0.01) and nutritional supplements (-0.02; 95% CI = -0.04 to -0.0003).

Conclusion

The weight loss program combining auricular acupuncture stimulation and nutritional supplements is effective and should be considered as one of the options for obesity treatment.

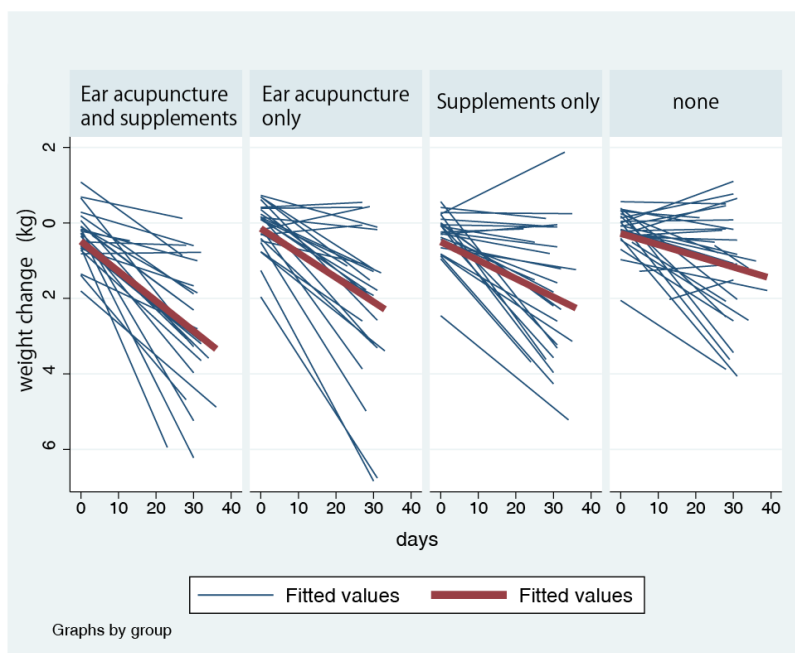


Fig. Comparison of weight changes among treatment groups over one month.

P-225

LONG-TERM EFFECTIVENESS OF LAPAROSCOPIC SLEEVE GASTRECTOMY VERSUS LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS IN PATIENTS WITH MORBID OBESITY

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Background

Laparoscopic sleeve gastrectomy (SG) and Laparoscopic Roux-en-Y gastric bypass (RYGB) have shown different results in terms of weight loss and comorbidities.

Objectives

To evaluate the long-term effectiveness of both techniques.

Method

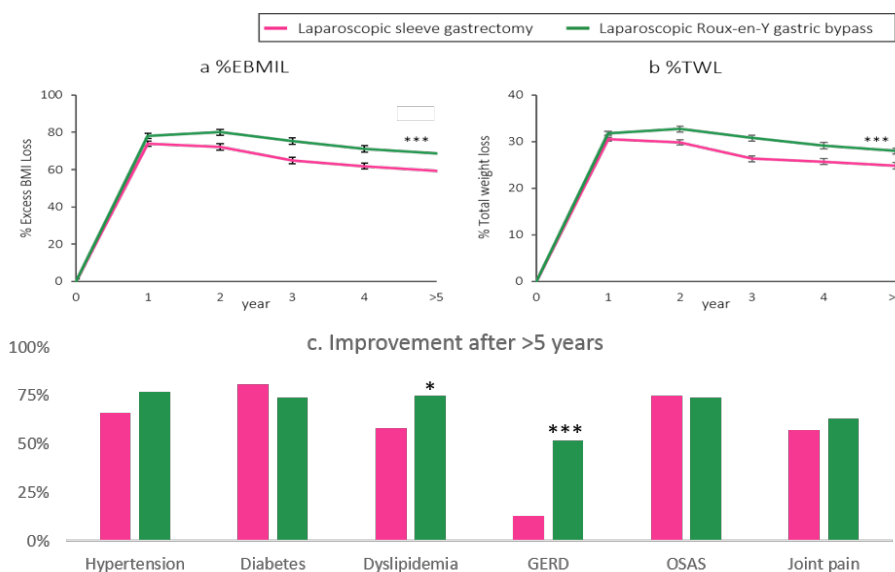
This multicenter open-label randomized controlled trial was conducted from 2013 until 2018 in two bariatric hospitals in the Netherlands. Patients eligible for bariatric surgery were randomized (1:1 ratio) between SG and RYGB with at least 5-year follow-up. The primary endpoint was percentage excess body mass index loss (EBMIL%). Secondary endpoints were percentage total weight loss (TWL%), resolution of obesity related comorbidity, morbidity and mortality within 30days postoperative, and revision surgery. Dutch Trial Register NTR-4741

Results

628 patients were randomized (mean age 43 [standard deviation (SD) 11] years; mean baseline BMI 43.5 [SD, 4.7]; 81.8% women) and 485 (77.4%) completed the >5year follow-up. At baseline 34.1% had hypertension, 18.5% Type 2 Diabetes, and 21.7% dyslipidemia. The mean percentage excess BMI loss at >5 years was 60.0% [95%CI, 57%-63%] after sleeve gastrectomy and 68.3% [95%CI, 65%-71%] after Roux-en-Y gastric bypass (difference: 8.3% units [95%CI, -12.5% to -4.0%]). This was within the predefined equivalence margin, $p < .001$. Differences of (partial) improvement of hypertension and type 2 diabetes were not significant over time. Dyslipidemia (12.9% versus 51.7%, $p = 0.029$) and Gastro-esophageal reflux disease (GERD) (58.1 versus 75.4, $p < 0.001$) improved significantly more after Roux-en-Y gastroc bypass in comparison to Sleeve gastrectomy. Minor complications were significantly less seen after sleeve gastrectomy (1.6% versus 4.7%, $p = 0.038$) Major complications were seen in 16 (5.1%) patients after SG and in 14 (4.4%) patients after RYGB ($p = 0.669$), for which 14 (4.5%) patients needed reoperations in the SG group and 12 (3.8%) in the RYGB group ($p=0.652$).

Conclusion

In patients with severe obesity laparoscopic sleeve gastrectomy seemed non-inferior to Roux-en-Y gastric bypass. However other factors such as improvement in comorbidities and complications differ between groups. Choosing the right procedure is a tailor made decision between surgeon and patient.



Abbreviations: %EBMIL = percentage excess body mass index loss; %TWL = percentage total weight loss; GERD = gastroesophageal reflux disease; OSAS = Obstructive Sleep Apnea Syndrome.

* $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$

Figure 1. Weight Loss and Comorbidity after >5 years.

P-226

LONG-TERM GROUP INTERVENTION FOR POST-BARIATRIC SURGERY PATIENTS: A RANDOMIZED CONTROL TRIAL

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Background

Bariatric surgery is considered the most effective treatment for severe obesity. However, despite initial successful weight loss, some patients experience long-term weight regain. The onset of disordered eating patterns after surgery has been consistently associated with poor weight outcomes following surgery. APOLO-Bari is a psychological intervention, developed to monitor the results of bariatric surgery and prevent weight regain in the long-term. The intervention runs in a group format, on a monthly basis, and lasts for 12 months.

Objectives

This study tested the efficacy of APOLO-Bari in preventing problematic eating behaviors and weight regain after bariatric surgery.

Methods

This study is a randomized control trial with two groups: the control group (CG; n=38) received treatment as usual (TAU) at a hospital center, and the intervention group (IG; n=113) received TAU plus the adjuvant treatment – APOLO-Bari. Participants were assessed at baseline, 6-month, end of treatment and 12-month follow-up. The assessment included the Rep(eat)-Q, to assess grazing, the UPPS negative urgency subscales, the Depression, anxiety, and stress scales, and weight/height. Missing data were handled with intention to treat approach with last observation carried forward.

Results

Repeated measures ANOVAS showed a significant interaction effect time X group for depression, anxiety, and stress scores ($F(1.77, 260.5)=3.84, p=0.027$ e $\eta^2=0.025$; $F(1.69, 248.03)=4.42, p=0.018$ e $\eta^2=0.029$; $F(1.77, 260.44)=4.37, p=0.017$ e $\eta^2=0.029$, respectively). There was also a significant interaction effect for grazing (Rep(eat)-Q scores; $F(1.84, 268.37)=5.21, p=0.008$ e $\eta^2=0.034$). Our data suggest that both groups evolved differently throughout the intervention time with the IG showing improvement in the psychological state while the control group showed an increase in psychopathology throughout time. Although there was not an interaction effect for BMI, the BMI trajectory for CG seems to increase throughout time, while the IG seems to have stable.

Conclusion

The APOLO-Bari intervention showed efficacy in the long-term improvement of psychological aspects related to poor weight loss outcomes following bariatric surgery, specifically, depression, anxiety, stress, and grazing-eating behavior. Effects on BMI were not significant but studies with larger sample sizes are needed. Psychological support is an effective strategy for the long-term maintenance of outcomes following surgery.

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LONG-TERM OUTCOMES OF LAPAROSCOPIC SLEEVE GASTRECTOMY AS A REVISIONAL PROCEDURE FOLLOWING ADJUSTABLE GASTRIC BANDING: VARIATIONS IN OUTCOMES BASED ON INDICATION

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Background

Significant controversy exists regarding the indications and outcomes after Laparoscopic adjustable gastric banding (LAGB) conversions to laparoscopic sleeve gastrectomy (LSG).

Objective

To comprehensively determine the long-term outcomes of sleeve gastrectomy as a revisional procedure after LAGB across a range of measures and determine predictors of outcomes.

Methods

600 revision LSG (RLSG) and 1200 controls (primary LSG (PLSG)) were included. Patient demographics, complications, follow-up, and patient-completed questionnaires were collected.

Results

RLSG vs controls; females 87% vs 78.8%, age 45. ± 19.4 vs 40.6 ± 10.6 years, $p=0.561$; baseline weight 119.7 ± 26.2 vs 120.6 ± 26.5 Kg $p=0.961$). Average post-operative follow up was 14.2 ± 2.6 years. Follow-up was 87% vs 89.3%. weight loss in RLSG at 5-years, 22.9% vs 29.6%TBWL, $p=0.001$, 10 years: 19.5% vs 27% TBWL, $p=0.001$. Revision LSG had more complications (4.8 vs 2.0% RR 2.4, $p=0.001$), re-admissions (4.3 vs 2.4% RR 1.8, $p=0.012$) staple line leaks (2.5 vs 0.9 %, $p=0.003$). Eroded bands and baseline weight were independent predictors of complications after RLSG. A 30% long-term re-operation rate was suggested in RLSG compared to 10% in PSLG. Severe oesophageal dysmotility predicted poor weight loss. RLSG reported lower quality of life scores (SF-12 physical component score 75.9 vs 88%, $p=0.001$), satisfaction (69vs93%, $p=0.001$) and more frequent regurgitation (58% vs 42%, $p=0.034$).

Conclusion

RLSG provides long-term weight loss, although peri-operative complications are significantly elevated compared to PLSG. Longer-term re-operation risk appears elevated at an estimated 30% compared to only 10% with PLSG. Four variables predicted worse outcomes: Eroded band, multiple prior bands, severe oesophageal dysmotility and elevated baseline weight.

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LOOKING FOR A PREDICTOR FOR POST OP GASTROESOPHAGEAL REFLUX IN SLEEVE GASTRECTOMY PATIENTS

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Background

The main causes of revisional gastric sleeve surgery in bariatric patients are the development of gastroesophageal reflux, intrathoracic sleeve migration and weight regain. Revisional surgeries for GERD are increasing worldwide because of patients who are not completely studied during the preoperative period. In bariatric facilities, esophageal physiology studies are not routinely performed; that's why an adequate preoperative evaluation of a patient includes manometry, fluoroscopy, endoscopy together with pHmetry and 24-hour impedance. Our study is focused on determining a wise selection of patients for Gastric Sleeve in order to reduce mid and long term complications.

Objectives

To determine preoperative predictors from High Resolution Esophageal Manometry, ph-Impedance, Fluoroscopy and Endoscopy for development of GERD in postoperative patients.

Methods

Retrospective analysis of a prospectively collected database of bariatric patients in a private center, Lima-Peru. Patients had complete studies of manometry, fluoroscopy, endoscopy together with pHmetry and 24-hour impedance resulting in 81 cases. Analysis was done using binary logistic regression.

Results

From 81 patients we retrieved 64 cases introduced to the analysis, we divide it by Symptoms. The difference between those groups are in pathological DeMeester score for (29,2%) and DeMeester score (55,5%) There is also a difference between asymptomatic patients (17.62 ± 11.12) and symptomatic patients (35.02 ± 65.37) in the variable Pre Op Post Swallow Gastric Pressure. °Hiatal hernia is visualized in endoscopy in 19.2% of asymptomatic patients and 39.3% of symptomatic patients, while esophagitis is visualized in endoscopy in 15.4% of asymptomatic patients and 38.7% of symptomatic patients. In fluoroscopy, hiatal hernia is visualized in 25% of asymptomatic patients and 45% of symptomatic patients, while GERD is visualized in 34% and 56.5%, respectively. The main predictor according to the logistic regression is GERD presence in Fluoroscopy with an OR of 38,41 and CI 95% (1,193-1,237).

Conclusions

The statement suggests that among the preoperative studies for patients undergoing surgery, fluoroscopy should be a standard and essential test. Fluoroscopy can predict the development of GERD symptoms in the postoperative period.

Table 1. Characteristics of Pre Op & Post Op patients.

	Pre Op	Post Op
(Variables n = 63/81)	Asymptomatic (34,2%)	Symptomatic (76,5%)
Gender F%/M%	70,29% / 29,4%	72,6 / 27,4%
Age	41,69 ± 15,48	44,33 ± 13,9
BMI Pre Op	35,23 ± 4,97	36,66 ± 5,57
BMI 12 months	25,06 ± 3,89	26,45 ± 4,35
24 - hour esophageal pHmetry-impedance		
DeMeester >14,7	29,2%	38,6%
DeMeester Index	14,08 ± 7,81	17,48 ± 13,77
High Resolution Esophageal Manometry		
24 hour Esophageal Impedance	42,6%	55,4%
LES pressure	13,78 ± 7,3	12,67 ± 7,11
LES incompetence	73,1%	67,7%ç
Dismotility pre Op	15,4%	16,1%
P1 Pressure above LES	74,92 ± 28,35	73,61 ± 34,27
P2 Pressure above LES	76,65 ± 35,06	80,89 ± 43,51
P3 Pressure above LES	107,46 ± 48,3	103,32 ± 52,22
Pre Op Gastric Pressure	10,38 ± 4,84	10,54 ± 4,14
Pre Op Post Swallow Gastric Pressure	17,62 ± 11,12	35,02 ± 65,37
Gastroesophageal Gradient (Inverted)	3,8%	8,1%
Questionnaire		
PPI consumption	11,5%	43,5%
Endoscopy		
Hiatal Hernia by Endoscopy	19,2%	39,3%
Esophagitis by Endoscopy	15,4%	38,7%
Fluoroscopy		
Hiatal Hernia by Fluoroscopy	25%	45,2%
GERD by Fluoroscopy	34,6%	56,5%

Table 2. Binary Logistic Regression looking for GERD predictors.

(Variables n = 63/81)	B	Sig.	OR		95% CI. para EXP(B)	
			Inferior	Superior	Inferior	Superior
Gender	-,336	,788	,714	,062		8,294
Age	,012	,811	1,012	,916		1,119
BMI Pre Op	,065	,639	1,067	,813		1,402
BMI 12 months	-,016	,922	,984	,710		1,364
DeMeester	,867	,614	2,379	,082		68,785
DeMeester Index	,051	,484	1,052	,913		1,213
24 hour Esophageal Impedance	-,062	,957	,940	,100		8,853
LES pressure	,065	,633	1,068	,816		1,396
LES Incompetence	,509	,746	1,663	,076		36,291
Dismotility pre Op	,628	,734	1,875	,050		70,688
P1 Pressure above LES	-,019	,381	,982	,941		1,023
P2 Pressure above LES	,037	,217	1,037	,979		1,099
P3 Pressure above LES	-,027	,212	,973	,933		1,016
Pre Op Gastric Pressure	,159	,259	1,172	,890		1,545
Pre Op Post Swallow Gastric Pressure	,019	,198	1,019	,990		1,048
Gastroesophageal Gradient	4,479	,120	88,129	,313		24,826
Symptoms	3,814	,126	45,318	,342		6,000
PPI consumption	-,732	,066	,024	,000		1,287
Hiatal Hernia by Endoscopy	-,115	,930	,891	,067		11,781
Esophagitis by Endoscopy	-,393	,819	,675	,023		19,554
Hiatal Hernia by Fluoroscopy	-,399	,125	,033	,000		2,575
GERD by Fluoroscopy	3,649	,039	38,417	1,193		1,237
constante	-,7258	,107	,001			

P-229

MAGNETIC SPHINCTER AUGMENTATION DEVISE (MSAD) OR ROUX-EN-Y GASTRIC BYPASS (RYGB) TO TREAT DE NOVO REFLUX AFTER SLEEVE GASTRECTOMY: A MATCHED CASE-CONTROLLED STUDY

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Background

Sleeve Gastrectomy (SG) have become the most popular bariatric procedure, promising satisfactory weight loss without major metabolic problems. De novo reflux can be though an adverse effect, impairing not only patients' quality of life but also exposing them to the risk of Barrett's esophagus and esophageal adenocarcinoma. Conversion to Roux-en-Y Gastric Bypass (RYGB) has been established to be the procedure of choice in these cases. Magnetic Sphincter Augmentation Devise (MSAD) has been used to treat reflux in patients without prior bariatric surgery. Its implementation after SG is less well studied.

Objectives

To investigate which of the following procedures offers better resolution of the symptoms in cases of de novo reflux after SG: implantation of MSAD or conversion to RYGB.

Methods

Data on patients who underwent implantation of MSAD as a treatment for de novo reflux after SG were retrospectively collected. To reduce confounding bias, subjects were matched to patients, who underwent a RYGB after SG (gender, age and BMI at the time of the revisional surgery). Results on weight loss, Reflux Score Index (RSI) and individual satisfaction was compared 1 and 2 years after the revisional surgery.

Results

A total of 33 patients underwent implantation of MSAD from 2019 to 2020 as a treatment of de novo reflux after various bariatric interventions in our hospital. 13 post- SG patients with regular follow up were selected. 1 patient, who could not be matched to any of the patients in the RYGB database due to her age, was excluded. A yearly follow up with improvement of RSI value, and reduction in the dosage of Protein Pump Inhibitors (PPI) showed statistically no difference (p value > 0.05) in both groups, satisfaction rate was also similar (p value > 0.05). Patients receiving MSAD showed moderate weight regain and those converting to RYGB presented with a mean weight loss, though without statistical significance. The complications both early and late were documented.

Conclusion

MSAD and RYGB are equally effective as an anti- reflux treatment in patients who have previously undergone SG. Early- and long-term risks need to be carefully considered before selecting either treatment option.

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MANAGEMENT OF EARLY POSTOPERATIVE COMPLICATIONS OF SADI-S

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Background

Currently, SADI-S is becoming more widespread, therefore the study of ways to correct early complications is an important task of bariatric surgery.

Objectives

Evaluate the safety and analyse the types of revision interventions after SADI-S in the early postoperative period and the reasons that led to them.

Methods

In 2020-2022 390 SADI-S operations were performed in the surgical department of the RCH of the SDMC FMBA of Russia. Women - 334 (85.6%), men - 56 (14.4%). The mean BMI was 42,6. The mean age was 45 years.

Results

Following types of complications were detected:

- No Sleeve leakage was detected.
- Anastomotic failure was noted in 4 patients (1%). The diagnosis was based on a complex of clinical and laboratory methods: pain, hyperthermia, tachycardia, X-ray of the upper gastrointestinal tract, CT scan, and upper endoscopy.
- Relaparoscopy was performed, and the defects were detected along the posterior wall of the anastomosis in all cases. It was sutured, Y-en- Roux reconstruction of anastomosis was made.
- Bleeding into the abdominal cavity was noted in 1 patient (0.25%). The diagnosis was based on a complex of clinical and laboratory methods: pain, tachycardia, ultrasound, and CT scan. Relaparoscopy and surgical hemostasis were performed. The bleeding was located in the area of the stapler line and required suturing hemostasis.
- Intraluminal bleeding was in 1 patient (0.25%). The diagnosis was established based on a complex of clinical and laboratory methods: pain, tachycardia, and upper endoscopy. Bleeding was located in the area of the anastomosis and hemostasis was performed with endoscopy argon coagulation.
- TEC was noted in 1 patient (0.25%) of PE in small branches of the pulmonary artery, in the early postoperative period after discharge, against the background of self-cessation of anticoagulant therapy, and successful non-operative treatment.
- There were no deaths in this group.

Conclusions

Overall, SADI-S is a safe and effective procedure for the treatment of morbid obesity and diabetes. Complications of surgical treatment occur in a very small percentage of cases and could be successfully eliminated with timely diagnosis and proper treatment.

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MANAGEMENT OF LEAKS FOLLOWING ONE ANASTOMOSIS GASTRIC BY PASS

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Introduction

One Anastomosis Gastric Bypass (OAGB) complications such as leakage can be dangerous and should be managed properly, yet little data exist in the literature regarding the management of leaks after OAGB and there are no guidelines to date.

Methods

We performed a systematic review and meta-analysis of the literature and 46 studies, examining 44318 patients were included.

Results

There were 410 leaks reported in 44318 patients of OAGB published in the literature, which represents a prevalence of 1% of leaks after OAGB. Surgical strategy was very variable among all the different studies, 62.1% of patients with leaks had to undergo another surgery due to leak. The most commonly performed procedure was peritoneal washout and drainage (with or without t-Tube placement) in 30.8% patients, followed by conversion to RYGB in 9.6% patients. Medical treatment with antibiotics, with or without total parenteral nutrition alone was conducted in 13.6% patients. Among the patients with leak, the mortality rate related to leak was 1.95% and the mortality due to leak in the population of OAGB was 0.02%.

Conclusion

The management of leaks following OAGB requires a multidisciplinary approach. OAGB is a safe operation with low leak risk rate and the leaks can be managed successfully if detected in a timely fashion.

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MANAGEMENT OF RE-SLEEVE COMPLICATION

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Introduction

Laparoscopic sleeve gastrectomy (LSG) became the most popular procedure in bariatric surgery. However, in the long-term follow-up, weight loss failure and intractable severe reflux after LSG can necessitate further interventions and one of these revisions is resleeve gastrectomy (ReSG). Our aim was to present a specific complication following ReSG and its complicated endoscopic treatment.

Methods

Our purpose is to describe the case of a 38 years old female who underwent LSG for a BMI of 35.6 and 6 years later she underwent a ReSG for BMI of 31. At POD 20 the patient was diagnosed with leak with an initial treatment of pigtail insertion. After, she was transferred in our facility and the endoscopic evaluation was completed with the diagnosis of gastric tube stenosis and endoscopic dilatation was performed.

Results

The endoscopic treatment was complicated by a perforation at the level of the third portion of duodenum. A surgical reintervention was necessary and a Petzer's tube drainage was placed. After three weeks, a second dilatation was attempted but a completely large opening was induced by the endoscopic dilatation. An emergency total gastrectomy was performed and the postoperative course was uneventful. The postoperative check up at two months after the procedure confirms the favorable outcome.

Conclusions

ReSG is an acceptable bariatric procedure only for well selected cases, but a particular attention to gastric stenosis and consecutively the leak should be taken. A good knowledge of different techniques of endoscopic treatment is mandatory for any expert center of bariatric surgery. Caution is warranted with any type of bariatric treatment and definitive surgical treatment could be an option for a repeated complication of endoscopic treatment.

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MANOMETRIC AND PH-IMPEDANCE RESULTS IN POST SLEEVE GASTRECTOMY PATIENTS WITH HIATAL HERNIA

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Background

The present study aims to observe the magnitude of altering the esophagogastric physiology, as patients with gastric sleeve migration into the chest are often associated with reflux symptoms. Patients with and without symptoms may experience changes in their motility and/or pHmetry studies, resulting in altered motility disorders that can lead to refractory reflux.

Objectives

To describe the results of impedance manometry and pHmetry in patients with post sleeve gastrectomy intrathoracic migration.

Methods

Retrospective analysis of a prospectively collected database of bariatric surgery patients in a private center, Lima-Peru. The selection of patients is 64 with a diagnosis of hiatal hernia by 3D volumetry and who have postoperative studies of impedance manometry and pHmetry. Analysis was done with the SPSS 26.0 program.

Results

Manometry shows an increase in LES incompetence values from 52.4% to 64.3%, while postoperative dysmotility changes from 28.6% to 45.2%. Post Op Post Swallow Gastric Pressure has a value of 108.34 + 106.25 in patients without hernia and 159.47 + 176.26 in patients with hernia. In contrast, the inverted Gastroesophageal Gradient maintains a similar value of 52.4% and 50%, respectively. Regarding PPI consumption, there is a variation from 42.9% to 72.1%, while in the symptoms variable, there is an increase from 61.9% to 90.7%. In preoperative data, despite the correction of preoperative hiatal hernia and the use of mesh, there is sleeve migration in 67.2% of the total.

Conclusions

Alterations in esophagogastric physiology are common in patients undergoing sleeve gastrectomy, regardless of whether they experience GERD symptoms. Preoperative evaluation and close postoperative monitoring of esophagogastric physiology are crucial to identifying patients at risk of complications and improving surgical outcomes. Manometry and pHmetry are useful tools to assess these alterations and should be routinely included in preoperative studies.

Table 1. Manometric and 24 hour pHmetry-impedance profile within Sleeve Volumetry records.

n = 64 Variables	3D/CT Sleeve Volumetry	
	Absent	Present
Gender (F% / M%)	76,2% / 23,8%	74,4% / 25,6%
Age	37,48 + 15,08	42,93 + 13,38
BMI Pre Op	33,54 + 4,82	36,83 + 6,24
BMI 12 months	23,25 + 3,52	25,82 + 4,32
24 - hour esophageal pHmetry-impedance		
DeMeester >14,7	66%	86%
DeMeester Index	33,09 + 29,89	45,44 + 33,38
24 hour Esophageal Impedance	81%	81,4%
High Resolution Esophageal Manometry		
LES pressure	10,46 + 6,08	9,91 + 9,50
LES incompetence	52,4%	64,3%
Dismotility Post op	28,6%	45,2%
P1 Pressure above LES	73,52 + 35,14	60,43 + 30,49
P2 Pressure above LES	80,87 + 42,03	67,55 + 30,48
P3 Pressure above LES	100,95 + 45,81	78 + 47,43
Post Op Gastric Pressure	18,09 + 11,35	19,59 + 12,79
Post Op Post Swallow Gastric Pressure	108,34 + 106,25	159,47 + 176,26
Gastroesophageal Gradient (Inverted)	52,4%	50%
Questionnaire		
PPI consumption	42,9%	72,1%
Symptoms	61,9%	90,7%
3D/CT Volumetry data		
Sleeve Volume	184, 51 + 77,94	203,87 + 102,22
Follow Up	55,09 + 38,23	62,41 + 49,32
Pre Op Data		
Hiatal Hernia	30%	57,1%
Surgical Repair	30%	50%
Mesh	25%	38,1%

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MARGINAL ULCER AFTER OAGB (ONE ANASTOMOSIS GASTRIC BYPASS): A SINGLE SURGEON EXPERIENCE IN THE MIDDLE EAST

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Background

Marginal ulcer (MU) is the most common late complication after gastric bypass. The incidence varies between 0.6 to 16% for RYGB, however it is possibly much higher, estimated around 28%.

Objectives

To demonstrate the incidence of MU after OAGB is similar to RYGB, however a longer gastric tube and the presence of bile in the stomach may be contributing in the pathophysiology of MU after OAGB

Methods

614 patients underwent bariatric surgery under the same primary surgeon between April 2017 and February 2023 and all data were prospectively collected in the IFSO Registry. 341(55.5%) patients had OAGB, 280 primary and 61 revisional. Average BMI was 40 (31-86), age 36 (16-75years) and 70% were female. All patients had gastroscopy prior to surgery and H. Pylori eradication when present. 270(79.2%) patients had a posterior anastomosis and 71(20.8%) had an anterior anastomosis.

Results

There were no leaks or mortality. 2 patients (0.6%) had major morbidity and were reoperated. During the follow up period, 13 OAGB were diagnosed with MU (3.8%): 11pts with a gastroscopy and 2pts with emergency CT-scan demonstrating perforated MU, 15 and 17 months after surgery. Results summarized in the table.

MU PATIENTS	TYPE OF SURGERY	PLACE OF THE ANASTOMOSIS	SMOKING	H-PYLORI	USE OF NSAID	TREATMENT
1	OAGB	ANTERIOR	yes	POSITIVE	NO	Emergency lap washout/drainage
2	SLEEVE-TO-OAGB	ANTERIOR	no	NEGATIVE	NO	Emergency lap washout/drainage
3	OAGB	ANTERIOR	yes	NEGATIVE	NO	RY configuration
4	SLEEVE-TO-OAGB	ANTERIOR	no	NEGATIVE	YES	Excision of anastomosis and RYGB
5	SLEEVE-TO-OAGB	ANTERIOR	no	NEGATIVE	NO	Excision of anastomosis and RYGB
6	OAGB	ANTERIOR	yes	NEGATIVE	NO	conservative
7	OAGB	ANTERIOR	no	NEGATIVE	NO	conservative
8	OAGB	ANTERIOR	no	NEGATIVE	NO	conservative
9	OAGB	POSTERIOR	no	NEGATIVE	NO	conservative
10	SLEEVE-TO-OAGB	POSTERIOR	no	NEGATIVE	NO	conservative
11	OAGB	POSTERIOR	yes	NEGATIVE	NO	conservative
12	SLEEVE-TO-OAGB	POSTERIOR	yes	NEGATIVE	YES	conservative
13	OAGB	POSTERIOR	no	NEGATIVE	NO	conservative

Conclusion

In our study, MU in OAGB had a similar incidence as RYGB (3.8%). Patients with anterior anastomosis and revisional procedures seemed to have worst outcomes and were less responsive to medical treatment.

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MARGINAL ULCERS FOLLOWING ONE-ANASTOMOSIS GASTRIC BYPASS: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Background

Marginal ulceration (MU) is an uncommon but significant complication following OAGB.

Objectives

This systematic review aims to understand the incidence rates, associated factors, and management of MU following OAGB.

Methods

Databases including PubMed-Medline, Scopus, and Cochrane Library were used to systematically identify all studies on OAGB where authors had reported on MU. Data were collected on basic demographics, incidence rates, risk factors, and management of this condition.

Results

Thirty-two studies involving 8868 patients were analysed. The mean age and preoperative BMI were 40.9+/-4.5 years and 47.6+/-5.6 kg/m² respectively. 71.9% (6376/8868) of patients were females. 20.6% (1825/8868) had preoperative gastroesophageal reflux disease. The mean operative time was 90.6+/-33.5 minutes. The average length of stay was 3.6 +/- 1.0 days. 14.1% (1252/8868) were described to have been prescribed proton-pump inhibitors (PPI) after surgery. A total of 228 patients were reported to have MU. The overall incidence of marginal ulcers was 2.59% (95% CI 1.89-3.52). 23.2% (53/228) presented within 12 months. 17.5% (40/228) were diagnosed with marginal ulcers after having endoscopy due to symptoms. Majority of patients, 61.4% (140/228), were treated conservatively with PPIs. A small proportion of 5.7% (13/228) patients had revisional surgery to treat MU. The 30-day morbidity rate was 4.6% (411/8868). The 30-day morbidity rate including Clavien Dindo classification ≥ 3 was 1.3% (119/8868). Mortality rate was 0.1% (11/8868).

Conclusion

Marginal ulcer is an uncommon complication following one anastomosis gastric bypass. Majority of patients are treated conservatively with PPIs. This is the first systematic review and meta analysis in literature characterising MU after OAGB.

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MEASUREMENT OF GASTRIC WALL THICKNESS AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY: OBESITY COMORBIDITIES AND GASTRIC WALL IN CHINESE PATIENTS WITH OBESITY

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Background

Leakage after laparoscopic sleeve gastrectomy (LSG) is believed to be due to a mismatch between the staple Height and gastric wall thickness (GWT). The aim of this study was to measure the GWT in Chinese patients with obesity and investigate the relationship between GWT and obesity-related comorbidities.

Methods

The GWT of 210 resected specimens after LSG was measured using a tissue measuring device, at a compression pressure of 8 g/mm² at the antrum, midbody, and fundus.

Results

Two hundred ten patients (171 female/39 male). The GWT was thickest at the antrum (3.02mm), midbody (2.22mm), and fundus (1.6mm). Patients with gastritis and those with reflux esophagitis had thicker GWT at the antrum; male had thicker GWT at the antrum and fundus; patients with body weight >100kg, and those with BMI >40kg/m² had thicker GWT at the fundus (Table 1). Linear regression analysis revealed a significant association between GWT with body weight and BMI at the antrum and fundus, furthermore, hypertension was associated with GWT at the fundus.

Conclusion

The anatomical location of the gastric wall was a major predicting factor of GWT. Furthermore, gastritis, reflux esophagitis, male gender, BMI >40kg/m², body weight >100kg, and hypertension may increase the GWT at the antrum and fundus in Chinese patients with obesity.

Table 1. Effect of clinical parameters on tissue thickness.

		N	Antrum		Midbody		Fundus	
				P		P		P
Gender	Male	39	3.16±0.34	0.01*	2.18±0.54	0.61	1.78±0.36	0.03*
	Female	171	2.99±0.36		2.28±0.49		1.55±0.30	
Body weight	>100 kg	125	3.05±0.39	0.10	2.22±0.50	0.77	1.66±0.36	0.01*
	<100 kg	85	2.97±0.31		2.24±0.50		1.58±0.24	
BMI	>40 kg/m ²	72	3±0.42	0.08	2.16±0.51	0.17	1.70±0.36	0.02*
	<40 kg/m ²	138	2.99±0.32		2.26±0.49		1.65±0.29	
Gastritis	+	174	3.55±0.29	0.03*	2.37±0.43	0.55	2.08±0.73	0.29
	-	36	3.07±0.35		2.22±0.50		1.61±0.31	
GERD	+	24	3.28±0.35	0.01*	2.17±0.37	0.50	1.74±0.48	0.19
	-	189	2.99±0.35		2.23±0.51		1.61±0.29	

Mean ± SD comparison of GWT expressed in millimeters (mm) at three locations of the stomach. BMI, body mass index; +, positive; -, negative; P<0.05*.

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MEASURING THE SMALL BOWEL LENGTHS IN OAGB: NECESSITY, ACCURACY AND TOOLS

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Background

Avoiding excess weight loss, malnutrition, reflux and other side effects is paramount when performing one anastomosis gastric bypass. Is measurement of the total small bowel length the key to optimize the outcome? What about the accuracy of measurement of the small bowel length in laparoscopy? What tools do we have?

Objectives

Find out if there is a real advantage by measuring the total small bowel length. Is there a way to reduce the risk of malnutrition, diarrhea, bile reflux, excess weight loss without compromising the weight loss target? Is it more time consuming? Risks for bowel injuries? Accuracy?

Methods

literature review of studies and actual reports of measuring bowel length in laparoscopy, laparotomy and endoscopy was performed as well as recent reports concerning bariatric-metabolic surgery taking the total small bowel length into account.

Results

the issue of total small bowel measurement is still controversial but can be helpful to optimize the outcomes of the OAGB procedure. This option must be taken into consideration. Further comparative studies and RCT's are mandatory

Conclusion

Measuring the total small bowel length is imperative in OAGB (as described by Carbajo^o) but is still subject to controversies regarding OAGB in general. Recent reports however show its value. Accuracy of measurement in laparoscopy is associated with mismeasurement. More studies and randomized trials are needed not only to confirm the need of measuring but also to develop and define the best skills and standards to optimize the accuracy.

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MEDICALLY ACCELERATED BARIATRIC SURGERY- IS IT WORTH IT?

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Background

Obesity is known to have adverse effects in health. In obese patients, weight loss can improve health risks such as diabetes, cardiovascular disease, and improve quality of life^{1,2}. The development of bariatric surgery means there are surgical options, when other interventions have failed. Bariatric surgery involves a multiple-disciplinary team approach and patient engagement; the process of surgery planning can take up to 6 months.

Objectives

In Gibraltar, we had two cases which we accelerated surgical planning due to the patients' presenting in medical extremis. This report reviews the outcome of these patients.

Methods

Review of 2 patients who were hospitalised to medically optimise them for bariatric surgery. Both patients were optimised for 3 months with intense dietetic and psychological sessions prior to surgery. Both patients were unable to leave hospital in the interim due to health reasons.

Results

Case 1 is a 37 year old male admitted as an emergency with new onset paraplegia. He has a background of depression, anxiety, hypertension and he had suffered from a spinal cord damage. His initial weight was 253kg, BMI 72 on enrolment to the bariatric service. He achieved a pre-surgery weight of 188kg. He underwent a sleeve gastrectomy. Post op wt loss is static at 166kg. Case 2 is a 50 year old female who was admitted with multi organ failure. She was kept for medical optimisation prior to her single anastomosis bypass as an inpatient. Her initial weight was 168kg with a BMI 62 and her weight was 115.8kg prior to surgery. She had demonstrated weight loss to 111 kg 3 months post operatively, however at 14 month follow up she has continued to weight gain to 131.5kg, despite addition of a GLP-1.

Conclusion

These cases reflected that in a short-term and supervised environment, very significant weight loss can be achieved prior to bariatric surgery. However weight gains are demonstrated in medium term follow up. We conclude that patients whom are not able to lose weight and mentally prepare for surgery outside of a medical environment will not be able to maintain the weight loss they could achieve post surgery.

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MENTAL ILLNESSES IN INDIVIDUALS UNDERWENT BARIATRIC SURGERY: A LITERATURE REVIEW

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Background

Patients undergoing bariatric surgery reveal high rates of psychiatric comorbidities, consisting mainly of depressive, anxiety and compulsive eating disorders. Ensuring support for these patients is essential, since the exacerbation of mental suffering and lifestyle can have significant effects on long-term weight control and quality of life after surgery.

Objective

Perform a literature search for articles of randomized clinical trials (RCTs) evaluating the presence and treatment of mental illnesses in individuals undergoing bariatric surgery.

Methods

RCT searches were performed in the PubMed and Scielo databases, using the keywords Bariatric Surgery and Mental Disease. The inclusion criteria were studies carried out in individuals who underwent bariatric surgery and who had some type of psychiatric illness, such as depression, anxiety or another type of comorbidity related to mental health. Studies that did not have mental illnesses as their main objective or that evaluated the preoperative period were excluded.

Results

23 articles were found. Of these, 21 were excluded: 13 were not associated with any mental illness, 1 did not deal with bariatric surgery, and 7 patients were assessed preoperatively. Eligible articles emphasized that therapeutic interventions improved the quality of life and mental health of patients after bariatric surgery. One of the studies evaluated the long-term effectiveness of a psychoeducational intervention and observed that the intervention promoted effects on weight loss, quality of life and psychosocial factors of the evaluated subjects. The other study presented the preliminary results of a cognitive-behavioral therapy (CBT) performed over the telephone, during the COVID-19 pandemic, and demonstrated improvements in generalized anxiety disorder, emotional eating, levels of depression and binge eating ($p < 0.001$).

Conclusion

Psychoeducational interventions and the therapeutic approach with CBT are effective strategies to improve symptoms of eating disorders and psychological stress. Despite a small number of RCTs, these interventions demonstrated benefits related to the evaluated mental illnesses, such as the improvement of depression, self-efficacy and anxiety in these individuals undergoing bariatric surgery.

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METABOLIC AND BARIATRIC SURGERY IN PATIENTS WITH CLASS-1 OBESITY; A TWO-YEAR FOLLOW-UP

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Background

The patients with class-1 obesity may need metabolic/bariatric surgery (MBS) in presence of obesity-related comorbidities, but MBS in this class of obesity is under debate. This study aimed to investigate the efficacy and safety of MBS in patients with class-1 obesity.

Methods and materials

This study was a historical cohort carried out on 112 patients with class-1 obesity (BMI: 30-35 kg/m²) with a 24 months follow up underwent MBS at Rasoul-e-Akram hospital. The required data were extracted through the Iran National Obesity Surgery Database. The data required for the study consisted of demographic information such as age, gender, comorbidities like type-2 diabetes mellitus (T2DM), hypertension, obstructive sleep apnea, and dyslipidemia before surgery, 6, 12 and 24-month after surgery.

Results

Mean age of the patients was 38.10±10.04 years; mean BMI was 32.96±1.35 kg/m² and 83.9% (n=94) of patients were female. Out of 18 patients with T2DM, 11 patients had completely remission and seven patients had partially remission. Obstructive sleep apnea, hypertension, dyslipidemia and gastroesophageal reflux disease were observed in 18, 23, 43 and 9 patients before surgery and totally resolved at 24-month follow up. Post-operative complications during 24-month follows up were checked to assess safety and there were no Denovo-GERD, intolerance, leakage, PTE/DVT, incisional hernia, hypoalbuminemia (Alb <3.5 g/dl), excessive weight loss (BMI<18.5 kg/m²) and mortality. Early complications were occurred as splenic injury in one case (0.89%), wound infection in one patients (0.89%) and extra-luminal bleeding in 10 (8.92%) after surgery, without any mortality.

Conclusion

MBS is safe and effective in class-1 obesity and can be considered in selected patients with obesity-related comorbidities.

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METABOLIC EFFECT OF OBSTRUCTIVE SLEEP APNEA IN PATIENTS UNDERGOING BARIATRIC SURGERY

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Objectives

The prevalence of obstructive sleep apnea (OSA) and its association with perioperative comorbidities in bariatric surgery patient is not well studied in the South Korea. We analyzed prevalence of OSA in patients who underwent bariatric surgery, and evaluated their association with metabolic parameters.

Methods

We retrospectively reviewed one hundred forty-four patients who underwent bariatric surgery. Ninety-eight of them underwent sleep study and was included in this study. The subjects were classified into two groups based on apnea-hypopnea index (AHI) of 15/hour cut-off.

Results

Overall, 52 (53.1%) of the subjects had $AHI \geq 15$ /hour. The subjects had larger neck circumference (43.0 ± 4.7 vs 40.5 ± 3.6 , $p=0.005$) and higher prevalence of diabetes (65.4% vs 45.7%, $p=0.049$) than those with $AHI < 15$ /hour. The $AHI \geq 15$ /hour group showed higher fasting glucose (134.7 ± 50.5 vs 114.8 ± 34.3 , $p=0.028$) and lower high-density lipoprotein (46.8 ± 9.9 vs 52.8 ± 13.3 , $p=0.013$) than the $AHI < 15$ /hour group.

Conclusions

More than half of the patients undergoing bariatric surgery had moderate to severe OSA. Those with moderate to severe OSA showed metabolic impairment compared to those with normal or mild OSA. Screening for OSA may be valuable in evaluating metabolic complications in morbid obesity patients.

Keywords: Obstructive sleep apnea, Obesity, Bariatric surgery, Metabolic.

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METABOLIC SURGERY IN LOW BMI DIABETIC PATIENTS: HOW I DO IT?Karim Abdelsamee*Faculty of Medicine, Ain Shams University, General Surgery Department, Cairo, Egypt***Background**

Diabetes mellitus is increasing at an alarming rate and has become one of the major causes of mortality and cardiovascular events worldwide. Current guidelines recommend multimodal approach including lifestyle management and hypoglycemic agents. However, fewer than half of patients with diabetes can maintain the therapeutic goal of HbA_{1c} level lower than 7% of total hemoglobin under currently available medical remedies. Bariatric surgery is more effective than medical treatment for the long-term remission of T2DM in obese patients. It leads to substantial weight loss and to vascular and endocrine-associated comorbidities improvement and remissions. T2DM improves at an early time point after surgery. There is independence of glycemic control from weight loss and absence of correlation between diabetes relapse and weight gain after surgery, demonstrating the efficacy of metabolic surgery in T2DM remission for patients with moderate obesity (BMI 30-35 kg/m²).

Objectives

The aim of this work is to emphasize the role of metabolic surgery in low BMI diabetic patients, and to present our experience in dealing with those patients.

Methods

We will present the international guidelines in chronological order till 2022, from both surgical and endocrinological points of view. We will present our own work in this group of patients.

Results

Percentage of complete remission and recurrence of Diabetes: At 2 or more years 78% remission, 87% improvement. At 5 years: 89% of those in the surgical arm were off insulin at 5 years with an average HbA_{1c} of 7% Compared with 61% off insulin in the non-surgical arm with an average HbA_{1c} of 8.5%.

Conclusion

T2DM patients with BMI 25-30 kg/m² are considered the most controversial group. SAGB is an efficient metabolic procedure and could be integrated into the treatment algorithm of T2DM. Such line of treatment opens new horizons to change the concept of treatment from diabetes remedy to diabetes remission.

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METABOLIC SURGERY IN SOUTH AFRICA: BASELINE DEMOGRAPHIC DESCRIPTION AND THREE-YEAR OUTCOMES FOR PATIENTS RECEIVING GBP AND BPD-DS SURGERIES

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Background

Considering increasing rates of obesity and patients undergoing metabolic surgery, South Africa data concerning outcomes are limited. SASSO routinely collects baseline and follow-up data from patients undergoing metabolic surgery procedures.

Objective

The aim of this study is to compare data between patients receiving either a GBP or BPD-DS surgery, at baseline and at 3-year follow-up and provide possible future insight in individualized patient surgery selections.

Methods

Retrospective analysis was conducted of available data including clinical and biochemical parameters, during a five-year period, pre-COVID-19 pandemic timeframe. Cohorts were stratified according to type of surgery, presence of T2DM and sex and compared for significant difference between baseline and 3-year post surgery follow-up.

Results

Overall weight loss was higher in the BPD-DS vs GPB group (47% vs 28%). Overall reduction in co-morbidities for BPD-DS surgery was demonstrated, however the BPD-DS cohort showed a greater reduction overall and significantly lowered F-BG. Direct correlation was observed between clinical parameters (weight, BMI, waist-, neck- and hip circumference, weight) and number of co-morbidities. BPD-DS cohort presented with a greater reduction and remission in co-morbidities, irrespective of glycemic control and gender.

Conclusion

Economic burden of obesity and associated comorbidities especially T2DM is high. Metabolic surgery is offered as a solution to improve patient outcomes and curb these costs. SASSO presents demographic data that could be used to assist in assigning a specific surgery type, on an individualized basis, to improve outcomes including sustained remission of co-morbidities.

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METABOLIC/BARIATRIC CLINICAL PRACTICE IN WEST AFRICA – OUR 10 YEAR EXPERIENCE

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Background

Obesity is recognized as a significant public health hazard, as it increases the risks for multiple diseases. Globally Metabolic or bariatric surgery has been proven to be a safe and effective treatment for Obesity, yet access to such metabolic or bariatric surgery in Nigeria continues to be hampered by a number of factors that include but by no means limited to lack of awareness, shortage of healthcare facilities and clinical manpower offering such services, stigmatization and lack of funding.

Method

Patient data was captured prospectively on 381 consecutive patient treated in our specialist clinic between January 2012 and June 2022. This data has been subjected to a retrospective review and analysis in this article.

Results

The total of 381 consecutive patients within the specified time period were treated in our clinic. In this cohort there were mostly females 314 (82.4%) with a mean age of 41.4 ± 9.1 . A total of 220 (57.7%) had an endoscopic intra-gastric balloon placement, 157 (41.2%) patients underwent laparoscopic sleeve gastrectomy, and 4 (1%) patients underwent laparoscopic gastric bypass. In this patient group only 4 (2%) patients procedures were conducted as re-do operation. In the intra-gastric balloon group of patients there were complication in 8 (3.6%) patients and no mortalities. The complication rate in the surgical groups were morbidity in 3 (1.9%) patients and mortality in 1 (0.6%) patient. Mean preoperative body mass index (BMI) was 42.4kg/m², and comorbidities included hypertension (26%), Type 2 Diabetes (8.7%), and obstructive sleep apnea (4.2%). There were no conversions to open surgery and at one year the mean weight loss was 16kg for patients who had balloon insertion and 28.7kg for patients who had the sleeve gastrectomy.

Conclusion

Metabolic or bariatric clinical services can be delivered to a high standard and safely with acceptable morbidity and mortality outcomes in this highly selected sector of the population of Nigeria. The obstacles to the wider access to and availability of such services in Nigeria need to be strategically tackled.

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MICRONUTRIENT LEVELS IN INDIAN AND GREEK BARIATRIC CANDIDATES AND DIFFERENCES BETWEEN THE TWO POPULATIONS

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Introduction

Patients living with obesity are frequently suffering from nutrient deficiencies even before metabolic bariatric surgery (MBS) and despite excess body weight. We attempted to quantify and compare micronutrient levels in two bariatric candidate populations.

Methods

We compared Indian and Greek patients living with obesity who presented for MBS during 1/1/2022–31/12/2022, based on their preoperative blood workup. The items examined were iron, ferritin, folate, vitamin-B12, total protein (TP), albumin, calcium, and vitamin-D. Categorical data are presented as frequencies (%). Continuous data are presented as means \pm SD (range). The two groups were compared with Fisher's exact test (categorical data) and *t*-test (continuous data).

Results

In the Indian cohort there were 2,093 patients (44.3% females), with a mean age of 44.05 years \pm 12.12 (16–76) and a mean BMI of 42.1Kg/m² \pm 9.2 (21.2–78.7). The mean serum values of their respective nutrients were as follows: iron 50mcg/dL \pm 32.1 (24–256), ferritin 96.5mcg/dL \pm 124.3 (5.7–628.0), folate 4.8mcg \pm 2.6 (1.6–17.5), vitamin-B12 291.9mcg \pm 158.7 (58–1973), total protein 7.0g/dL \pm 0.6 (3.6–9.0), albumin 4.1g/dL \pm 0.5 (1.9–6.7), calcium 8.9mg/dL \pm 0.6 (3.1–12.4), and vitamin-D 19.3ng/mL \pm 11.2 (1.2–83.2). The Greek cohort comprised data from 134 patients (64.9% females), with a mean age of 39.3 years \pm 10.4 (17–64) and a mean BMI of 46.7Kg/m² \pm 8.8 (28.6–66.6). Their mean preoperative nutrient values were the following: iron 48mcg/dL \pm 30.5 (19–234), ferritin 95.1mcg/dL \pm 112.1 (4.2–635.6), folate 5.1mcg \pm 3.4 (1.9–18.4), vitamin-B12 431.7mcg \pm 185.4 (133–1073), total protein 7.0g/dL \pm 0.7 (3.9–8.5), albumin 4.5g/dL \pm 0.5 (3.2–6.9), calcium 9.3mg/dL \pm 0.7 (6.7–12.3), and vitamin-D 22.4ng/mL \pm 12.7 (3.2–53.7). When comparing the two groups, the Indian bariatric candidates had significantly lower BMI [95%CI (-62)–(-3.0)], and significantly lower levels of vitamin-B12 [95%CI (-167.9)–(-111.7)], albumin [95%CI (-0.5)–(-0.3)], calcium [95%CI (-0.5)–(-0.3)] (*p*<0.0001 for all), and vitamin-D [95%CI (-5.1)–(-1.1)] (*p*=0.0021).

Conclusions

Indian and Greek bariatric candidates presented differences in some micronutrients before MBS. Discrepancies in micronutrients between the two populations may be attributable to genetic heterogeneity and dietary diversity, nevertheless, other factors may contribute, given that these differences were not applicable across micronutrients.

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MID-TERM EVOLUTION OF INFLAMMATORY PATTERNS AFTER PRIMARY BARIATRIC SURGERY

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Background

Adipose tissue is an active endocrine and paracrine organ which releases cytokines and bioactive mediators, which influence body weight homeostasis as well as a number of metabolic and coagulative parameters. White blood cell count (WBC) has been proposed as an emerging biomarker for predicting metabolic syndrome (MetS) and mortality. Bariatric surgery (BS) improves comorbidities associated with obesity and the MetS and the surgically induced weight loss is known to improve inflammatory status.

Objectives

To analyze the mid-term evolution of inflammatory patterns of patients with severe obesity after primary BS.

Methods

Retrospective analysis of prospectively collected data of patients undergoing laparoscopic primary BS (gastric by-pass or sleeve gastrectomy) from January 2004-December 2015. Outcomes included changing of inflammatory patterns in terms of leukocytes, neutrophils and, lymphocytes. The inflammatory patterns were defined as follows:

- Favorable inflammatory pattern (FIP): inflammatory markers \leq 25th percentile.
- Unfavorable inflammatory pattern (UIP): inflammatory markers \geq 75th percentile.

Results

105 patients with FIP and 59 patients with UIP underwent laparoscopic primary BS. The baseline demographic data of both groups and the prevalence of comorbidities prior to surgery are shown in Table 1. There was statistically significant difference between the two groups regarding initial weight, BMI and, waist circumference. The postoperative weight evolution and mid-term evolution of inflammatory patterns of both groups were represented in Fig. 1. Once the maximum weight loss was achieved, no significant differences were found in the inflammatory patterns between the two groups.

Conclusion

After BS, the values of inflammatory markers between FIP group and UIP group are comparable, probably related to weight loss and resolution of comorbidities.

Table 1. Baseline demographic data.

	FIP (n=105)	UIP (n=59)	p
Gender ♀:♂	88:17	43:16	0.094
Age (years)	46.47 (19.5-63)	44.40+/-11.6	0.793
Initial weight (Kg)	120 (90-219)	126 (95-229,7)	0.042
Height (m)	1.63 (1.4-1.8)	1.64+/-0.1	0.630
Initial BMI (Kg/m ²)	45.55 (35-69.3)	47.69 (37.8-70.9)	0.013
Waist circumference (cm)	122.5 (93-200)	136.11+/-20.7	0.011
Gastric by-pass	82 (78.1%)	38 (64.4%)	0.058
Sleeve gastrectomy	23 (21.9%)	21 (35.6%)	
Prediabetes	13 (12.4%)	7 (11.9%)	0.916
Type 2 diabetes	51 (48.6%)	32 (54.2%)	0.745
Arterial hypertension	45 (42.9%)	27 (45.8%)	0.719
Dyslipidemia	73 (69.5%)	39 (66.1%)	0.866
MetS	48 (45.7%)	30 (50.8%)	0.528

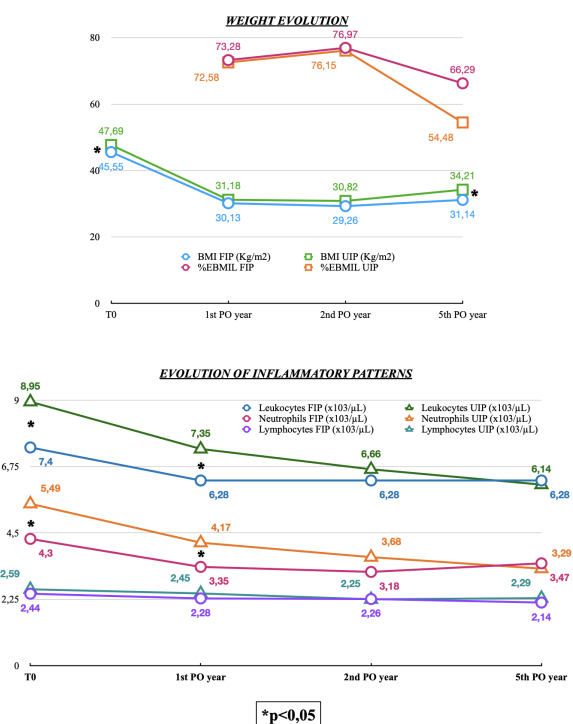


Figure 1. Postoperative weight evolution and mid-term evolution of inflammatory patterns.

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MORBIDITY RATES AND EARLY WEIGHT LOSS OUTCOMES IN A MULTI-ETHNIC COHORT UNDERGOING BARIATRIC/METABOLIC SURGERY

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Background

Bariatric & metabolic surgery (BMS) is indicated for morbid obesity and confers survival benefit in suitable patients. However, complications arising from BMS are difficult to manage and have a significant impact on patients. In this study, our aim was to evaluate the complication rates of BMS in a multi-ethnic Asian cohort.

Methods

All patients who had undergone either primary or revisional BMS from 2010 – 2022 were included. BMS procedures included laparoscopic sleeve gastrectomy (SG), roux-en-y gastric bypass (RYGB) or one-anastomosis gastric bypass (OAGB). Morbidity was graded using the Calvien-Dindo (CD) classification, with CD ≤ 2 being “minor” and ≥ 3 being “major”.

Results

A total of 1016 BMSs were performed during the study period, comprising 73.6% SG (n = 748), 12.6% RYGB (n = 128) and 13.8% OAGB (n = 140). The median length of stay was 2 days (IQR 2-3). The median operative time (mins, IQR) for SG, RYGB, and OAGB were 89.0 (70.0 – 120.0), 162.0 (137.5 – 192.25), and 110.0 (91.0 – 127.5), respectively. Major 30-day morbidity was observed in 1.7% (n = 17) of all BMS procedures and occurred in 1.6%, 3.9% and 1.4% of SG, RYGB and OAGB respectively. There was no reported 30-day mortality in this series of patients. Median percentage excess weight loss (%EWL) at 6 and 12 months post-BMS was 48.5 (IQR 38.6 – 61.2) and 59.9 (IQR 46.0 – 76.0), respectively. Median percentage total body weight loss (%TBWL) at 6 and 12 months post-BMS was 21.1 (IQR 17.0 – 25.5) and 25.5 (IQR 19.9 – 31.3), respectively.

Conclusion

BMS is a safe and effective treatment for patients with morbid obesity.

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MULTIDISCIPLINARY DISCUSSION FACILITATES SAFE ACCESS TO SURGICAL TREATMENT OF OBESITY FOR HIGH-RISK CANDIDATES AND EXPEDITED CARE WHERE APPROPRIATE

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Background

Obesity is a chronic and progressive disease associated with serious complications and comorbidities. While bariatric and metabolic surgery has proven an effective treatment, the balance of risks and benefit is not always clear. In healthcare settings with limited resources; and where the allocation of these resources is heavily scrutinized, access to bariatric and metabolic surgery is often limited to those who fall within narrow selection criteria and favors those who suite to low-acuity settings. The new International Federation for the Surgery of Obesity and Metabolic Disorders (IFSO) 2022 guidelines describe the critical role of multidisciplinary approach in providing comprehensive obesity care, manage modifiable risk factors, reduce perioperative complications, and improve outcomes. Our health service implemented a monthly multidisciplinary-team (MDT) meeting in June 2019, which includes bariatric surgeons, endocrinologists, anaesthetists, nurses, and dietitians. Almost four years later, we looked to identify the outcomes that have come from its implementation.

Methods

We conducted a retrospective analysis of indications for discussion and meeting outcomes for all patients discussed at a single unit's multidisciplinary team meeting between June 2019 and February 2023.

Results

A total of 113 case discussions occurred over 14 meetings, regarding 99 individual patients. No meetings were held between March 2020 and May 2022 due to COVID-19 related service restrictions. The reasons for patients to be discussed were high-risk surgery and/or anaesthesia (88), concerns of safety to proceed with surgery (92), expedited care requirement (18), suitability of surgery at low-acuity-campus (11) and re-discussion after alternate treatment (12). Of the patients discussed 27% were referred to an alternative pathway and a further 2% declined surgery after individual consultation. Significantly, 71% of high-risk / safety-concern patients, 83% of expedited care and 81% of low-acuity-campus patients and 41% of re-discussed patients were approved for surgery after MDT discussion.

Conclusion

Bariatric and metabolic surgery services should adopt a regular multidisciplinary team meeting, as this will allow high-risk or those whose level of risk is questioned, to safely proceed to surgery in majority of cases and provide a pathway to pre-optimisation or expedited care where appropriate.

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NAFLD AFTER RYGB IS ASSOCIATED TO ERYTHROCYTE SEDIMENTATION RATE (ESR) AND FATTY LIVER INDEX (FLI)

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Background

RYGB is effective in resolving nonalcoholic fatty liver disease (NAFLD) due to great weight loss. However, most of the studies were carried at 1-2 year after surgery and little is known for longer follow up.

Objectives

To measure hepatic fat content by Magnetic Resonance (MRI) long after RYGB and identify which clinical parameters were associated to NAFLD.

Methods

MRI was performed 8 years after RYGB in 22 patients (11 diabetic (T2D) and 11 non-diabetic (ND) before surgery), to measure hepatic triglyceride (HTG), visceral (VF) and subcutaneous fat (SC). MRI data was compared to Fatty Liver Index ((FLI) that includes BMI, Waist circumference (WC), gamma-glutamyl transferase (GGT), Triglycerides (TG)), Erythrocyte Sedimentation Rate (ESR) and others biochemical parameters. In each patient was performed euglycaemic hyperinsulinemic clamp combined with tracer infusion to measure muscle insulin sensitivity (M/I) and hepatic (H-IR) and adipose tissue insulin resistance (AT-IR).

Results

After RYGB all patients were ND; 8 were no-NAFLD (HTG<5.5%), 7 Moderate NAFLD (M-NAFLD; HTG 5.5-20%), 7 Severe NAFLD (S-NAFLD, HTG >20%), Prior T2D was not associated to presence of NAFLD. Across the 3 groups (S- vs M- vs no-NAFLD) there was a significant decrease of SC (357±43 vs 339±28 vs 201±30cm², p=0.007), BMI (37±2 vs 32±2 vs 30±1kg/m²; p=0.04), ESR (38±9 vs 19±5 vs 12±4mm/h; p=0.02), FLI (79±7 vs 46±10 vs 35±8; p=0.005), AT-IR (p=0.03) and H-IR (p=0.02). HTG was associated with BMI (r=0.67), FLI (r=0.74), ESR (r=0.78) (for all p<0.001), with SC, VF, cholesterol (CHOL), H-IR, AT-IR (for all p<0.02), and with TG, C-reactive protein, insulin, platelets, WC (all p≤0.05). No relationship between HTG and HDL-CHOL, AST, ALT, GGT, ferritin, fibrinogen and percent of weight loss or regain. The relationship between HTG and ESR was maintained after adjusting for BMI or FLI. In a multiple regression model, BMI, CHOL and ESR explained 86% of HTG variability (r=0.93, p<0.0001).

Conclusion

Long after RYGB we recorded severe liver steatosis in 30% of subjects independently associated to FLI and high ESR. If confirmed by larger studies, both FLI and ESR could be used as a simple diagnostic marker of presence of NAFLD after bariatric surgery.

P-250

NAVIGATING THE PSYCHOSOCIAL LANDSCAPE OF BARIATRIC SURGERY: A LONGITUDINAL STUDY ON QUALITY OF LIFE OUTCOMES

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Background

Bariatric surgery is known to reduce weight and improve metabolic comorbidities, leading to better quality of life (QoL). However, few studies focus on patient-reported outcomes in QoL and psychosocial factors. A variety of instruments have been used to measure QoL, but none cover all domains equally, limiting the ability to compare outcomes across studies.

Objectives

The study aimed to prospectively analyze the efficacy of three QoL questionnaires (QoLQ) in severe obese population undergoing bariatric surgery and compare results with a control group of obese patients treated with conservative methods.

Methods

80 severe obese patients who underwent laparoscopic bariatric surgery and 20 control treated conservatively were included in the study. Patients completed questionnaires pre-operatively and during the 1-year post-operative follow-up. Repeated measures analysis of variance (ANOVA) was used to analyze the data, with a significance level set at 95%.

Results

The surgery group demonstrated a significant improvement in QoL, particularly in self-esteem, physical activity, and eating status domains. However, the impact of surgery on social dimensions of QoL was less pronounced. A moderate correlation was found between weight loss and general QoL, self-esteem, physical activity, and eating status. The correlation between weight loss and social dimensions was low.

Conclusion

This study shows that bariatric surgery leads to significant improvements in QoL, particularly in self-esteem, physical activity, and eating status domains. However, the impact of surgery on social dimensions of QoL appears to be less pronounced. The moderate correlation between weight loss and QoL improvement suggests other factors may also contribute to QoL enhancement. Further research is needed to understand the interplay between weight loss, bariatric surgery, and various dimensions of QoL.

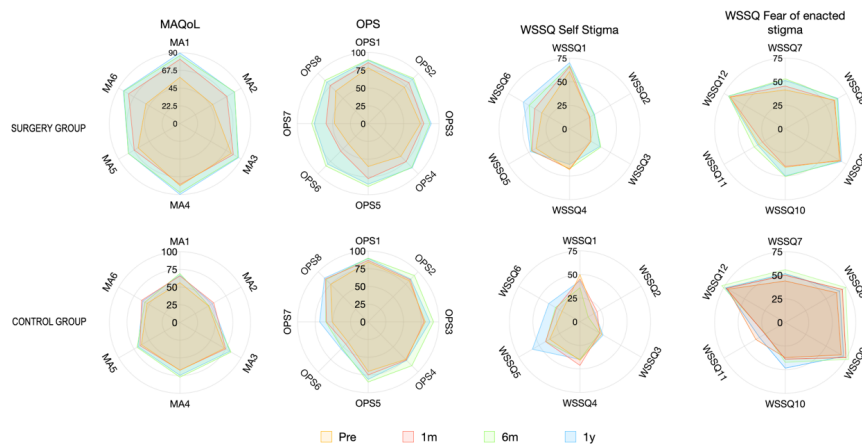


Figure 1. Radar charts of QoLQ scores during follow-up.

Table 1. Demographic characteristics.

	Surgery (n=80)	Conventional (n=21)	P
IMC	40.6 (4.9)	40.5 (6)	n.s.
Age	47.7 (11.4)	47.4 (10)	n.s.
Gender			
Male	27 (33.8)	7 (33.3)	n.s.
Female	53 (66.7)	14 (66.3)	n.s.
Questionnaire Score			
MAQoL II	0.49 (1.2)	0.36 (1)	n.s.
OPS	20 (6.4)	22.3 (5.2)	n.s.
WSSQ	33 (8.6)	34.4 (8.5)	n.s.

Categorical variables in n (%). Continuous variables in mean (SD). WSSQ the higher the worse.

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NEED FOR INCREASED EQUITY IN ACCESS TO METABOLIC AND BARIATRIC SURGERY ACROSS THE UNITED STATES

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Background

While bariatric surgery is the most effective and durable treatment for obesity, access is not equitable. Better understanding the characteristics of individuals who have low rates of bariatric surgery (despite being eligible) can identify populations that would benefit from resources to reduce barriers to access for this treatment.

Objectives

To determine the rate of bariatric surgery use among eligible adults with obesity using demographics, health characteristics, and geography.

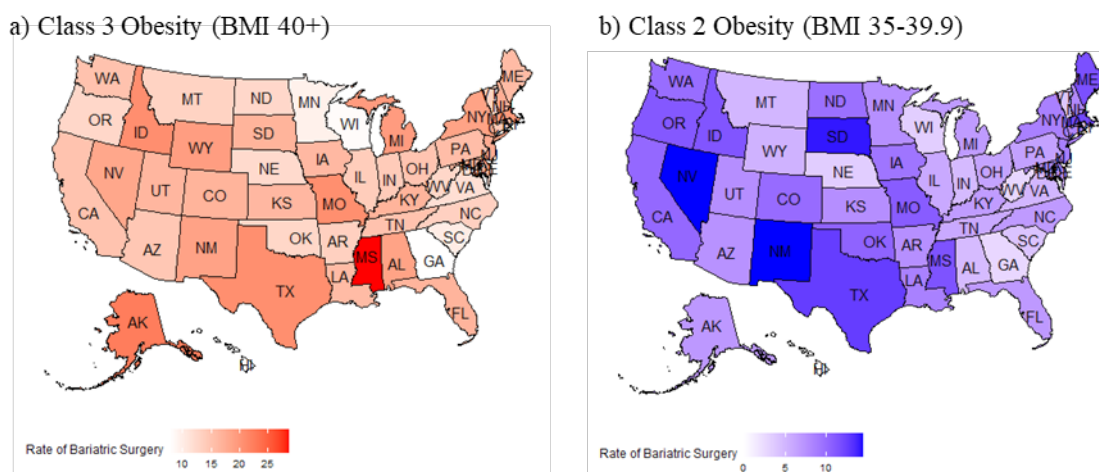
Methods

Adults with obesity were identified in US employer-based retrospective claims database, and rates of bariatric surgery were examined across demographics (age, sex, region, year, rurality, health plan type) health characteristics (obesity-related comorbidities, healthcare costs, inpatient admissions), and by state. Given differences in coverage, rates are examined for two populations: Class 2 (BMI 35-39.9) and Class 3 (BMI 40+) obesity.

Results

Of the 694,288 adults identified in the data who met the inclusion criteria, 49,708 (7.2%) had bariatric surgery; 3.6% of those with Class 2 and 9.6% of those with Class 3 obesity had bariatric surgery. Based on demographic and health characteristics, bariatric surgery rates ranged from 1% (only had one obesity-related comorbidity) to 14% (high baseline healthcare costs), and from 2% (had no baseline obesity-related comorbidities) to 42% (had a baseline GERD diagnosis) among those with Class 2 and Class 3 obesity, respectively. Geographically, rates ranged from 0% (Hawaii) to 14.4% (Nevada/New Mexico) for those with Class 2 Obesity and from 7.7% (Hawaii) to 28.8% (Mississippi) among those with Class 3 Obesity (see Figure).

Figure. Rates of Bariatric Surgery across the US, 2017-2021, by Obesity Class



Conclusion

Utilization of bariatric surgery varies across characteristics, indicating substantial inequity in access to this treatment. To ensure greater access to the most effective treatment for obesity, policies should be implemented to reduce or eliminate barriers to care.

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NEUROPSYCHOLOGICAL ASSESSMENT OF COGNITIVE FUNCTIONS IN PATIENTS WITH SEVERE OBESITY

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Background

Obesity is considered a chronic, multifactorial disease, characterized by excess body fat, which can lead to biopsychosocial problems, and is currently identified as one of the most serious public health problems, especially due to its increasing prevalence worldwide. In recent years, several studies in different areas of health have contributed to increasing knowledge about the problems associated with severe obesity. Neuropsychology has been studying the effects of obesity on cognition and its relationship with dementia, as well as factors that may be related to the difficulty of losing weight.

Objectives

The objective of this study is to assess the neuropsychological aspects of cognitive functions in patients with severe obesity

Methods

99 patients were selected at the outpatient clinic of our Bariatric and Metabolic Surgery Division, between 2018 and 2020. Patients were divided according to obesity class in G1 ($40.0 < \text{BMI} < 49.9 \text{ Kg/m}^2$; $n = 56$) and G2 ($\text{BMI} \geq 50 \text{ Kg/m}^2$; $n = 43$).

Results

Patients had mild cognitive deficits in executive functions, short- and long-term verbal memories, and memory retrieval. There was no significant difference in cognitive functions related to obesity class (G1 vs. G2)

Conclusion

Patients with severe obesity had mild cognitive deficit compared to the general population in short- and long-term verbal memory and executive functions, without significant relation to obesity class.

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NEXT DAY DISCHARGE POST LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS SURGERY: A NINE YEAR SINGLE CENTRE EXPERIENCE

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Background

Laparoscopic Roux-en-Y Gastric Bypass (LRYGB) is a well-established procedure, however, the practice of next day discharge remains varied between centres. This is a retrospective review of a single centre outcome after establishing next day discharge as a routine practice. This has been facilitated by the utilisation of frequent telephone follow-up by a specialist nurse.

Methods

A retrospective cohort analysis of patients who underwent primary LRYGB between March 2012 and December 2022. We evaluated patients' age, gender, initial BMI, 30 day complication rate, readmission rate and return to theatre rate.

Results

482 patients were included in the study, 83.8 % female (n404), mean age of 47.5, BMI range 45 – 64. 11.4% of patients failed to be discharged the following day (n55). 30 day complication rate was 3.1% (n15) with only 0.8% being a major complication (n4). Only 1.5% of patients required return to theatre within 30 days of discharge (n7).

Conclusion

Next day discharge following LRYGB seems to be safe and cost-effective and allows early patient return to normal activity.

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NISSEN SLEEVE AS A REDO SURGERY FOR NON-RESPONDER OF WEIGHT LOSS AND THERAPY-RESISTANT REFLUX

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Background

Roux-en-Y gastric bypass (LRYGB) would be the procedure of choice for non-responders and GERD-related patients after primary band procedures. However, not every patient is a candidate for RYGB, and sometimes the patient can insist only on alternatives other than malabsorption procedures.

Objective

To justify another alternative option for patients with severe reflux and obesity who are unwilling or unable to undergo RYGB.

Methods

A 34-year-old female patient with history of gastric banding in 2001 and a subsequent weight loss of 40 kg (BMI 34 to 20 kg/m²), reposition banding in 2002 owing to dislocation, and removal in 2010 due to reflux and passage issues. She presented to our hospital with weight regain (weight 101 kg, BMI 38), and comorbidities like GERD symptoms, psychological burden, and snoring. Upper GI endoscopy showed a large sliding hiatal hernia with GERD grade D (LA classification). Also, the Upper GI series confirmed a reflux and sliding hiatal hernia. Therefore, the decision was made to proceed with RYGB, but the patient refused as she wanted to prepare for a triathlon and was afraid of diarrhea or sugar deficiency during the competition. As an alternative, a Nissen sleeve was offered, and a curorplasty was to repair the sliding hernia.

Results

The postoperative course was uneventful and at the 6-week follow-up, her weight was 90 kg, which corresponds to a BMI of 33.9. The patient had symptoms free; she had no reflux anymore with no medication and no vomiting. One year follow-up, she was still in a good condition. Her weight was 77 kg, which corresponds to a BMI of 28.5, stable, and had the impression of being able to eat more, but also exercise a lot. No reflux complaints and PPI drugs have already stopped after 2 weeks postoperative and are no longer needed.

Conclusion

Nissen sleeve could be a viable alternative option for patients with severe reflux and morbid obesity who are unwilling or unable to undergo RYGB.

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NON-NUTRITIONAL CAUSES OF IRON DEFICIENCY ANAEMIA AFTER OAGB – TO RULE OUT THALESSEMIA TRAIT

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Background

OAGB being a malabsorptive procedure, iron deficiency anaemia is to be looked out for.

Objective

To identify the non-nutritional causes, if any, in patients undergoing OAGB as primary (PGB) or redo (RGB) procedure.

Methods

Retrospective analysis of prospectively collected data, of patients undergoing PGB, RGB from 2012 to 2016, PG-B:RGB 75:34 was studied.

Results

The non-nutritional causes observed in patients were- anastomotic ulcers- 4 Menorrhagia with fibroids- 8 females, Bleeding piles -1, Diabetic nephropathy- 1. 3 female – had recurrent iron deficiency in spite of regular oral and sometimes correction with parenteral iron. Haemoglobin (Hb) electrophoresis done in these 3 patients showed Thalassaemia trait.

Conclusion

The average prevalence of b- thalassaemia carriers in India is 3-4%, which means 35 to 45 million carriers in the multi-ethnic population of 1.20 billion. So while looking for non-nutritional causes of Iron deficiency post OAGB, with a high level of suspicion, Hb- electrophoresis should be included in protocol TO DIAGNISE Thalassaemia trait, for better management and prevention of anaemia in the post operative patients.

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NOVEL BARIATRIC SURGERY MODELS IN MICE – DIFFERENTIAL EFFECTS ON BODY WEIGHT LOSS AND FATTY LIVER DISEASE

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Background

Bariatric surgery (BS) is an effective treatment for obesity and associated comorbidities, including non-alcoholic fatty liver disease (NAFLD). In recent years, the number of available bariatric procedures has increased, yet their outcome and mechanisms of action have not been compared in detail.

Objectives

We performed vertical sleeve gastrectomy (VSG) and plication (VSP), Roux-en-Y gastric bypass (RYGB), and one-anastomosis gastric bypass (OAGB) with three different biliary limb lengths (25%= Ω_1 , 50%= Ω_2 , 75%= Ω_3) for comparison, as the latter gain popularity.

Methods

Mice were fed a Western diet (WD) for 12 weeks, followed by surgery, and subsequent sacrifice at week 20. Six different types of BS were performed, mutually compared to a sham and a control group (WD, no surgery). NAFLD, fat cell hypertrophy, muscle wasting, and intestinal remodeling were evaluated by histology and biochemistry. Statistical differences between group mean values were assessed by one-way ANOVA tests.

Results

Relative weight loss was significantly different ($p < 0.0001$) amongst the groups (sham+12.71%, VSG-9.18%, VSP+6.05, RYGB-33.52%, Ω_1 -22.47%, and Ω_2 -24.03%). Average food intake was significantly lower in VSG and VSP compared to RYGB ($p < 0.05$), Ω_1 ($p < 0.01$), and Ω_2 ($p < 0.001$). In RYGB, Ω_1 , and Ω_2 , relative visceral adipose tissue weight was significantly lower compared to the sham mice ($p < 0.0001$). Fat cell diameter and area were significantly lower ($p < 0.0001$) in all BS groups compared to sham mice and differed significantly amongst each other as well. In RYGB, Ω_1 , and Ω_2 , significantly attenuated serum ALT and liver triglyceride content ($p < 0.01$) was observed. Histologically, sham-operated mice had developed severe liver steatosis, fibrosis and moderate inflammation after 20 weeks of WD feeding, which was attenuated by BS, especially following Ω_1 ($p < 0.05$), and Ω_2 ($p < 0.01$). Bacterial translocation in the liver was observed in RYGB, Ω_1 , and Ω_2 ($p < 0.001$) and for RYGB and Ω_1 ($p < 0.01$) in ileal tissue as well. Notably, the Ω_3 procedures resulted in 100% mortality after just three weeks, due to severe malnutrition and rapid weight loss.

Conclusions

BS in mice improves histological NASH, and RYGB, Ω_1 , and Ω_2 to the greatest extent. Though, the observed bacterial translocation in these models requires further investigation regarding long-term effects.

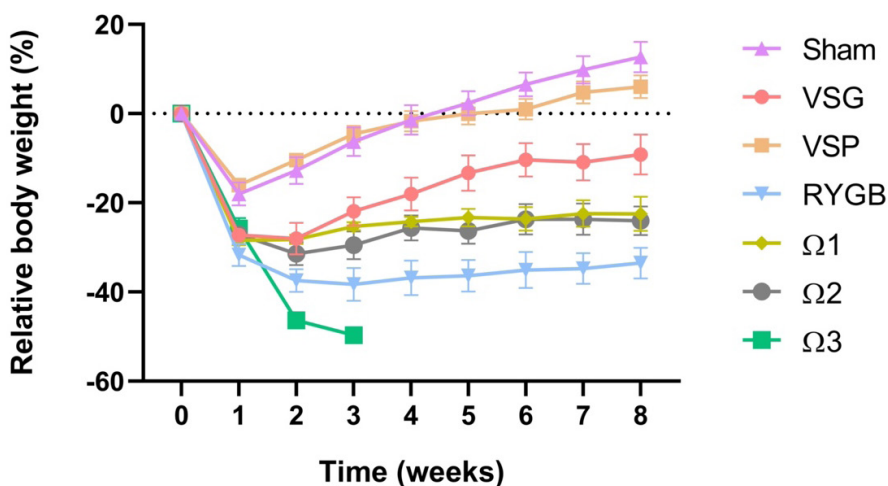


Figure.

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NUTRITIONAL INTERVENTION IN HEPATOMEGALY - IS THE BMI WHO DETERMINES?

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Background

Obesity is associated with hepatomegaly and hepatic steatosis. Weight reduction before bariatric and metabolic surgery is recommended for patients, especially those who are at greater surgical risk, since the benefits promoted are wide and notorious.

Objective

Analyze the nutritional intervention in the reduction of the size of the liver/hepatomegaly in two contexts: super obesity and obesity grade II.

Method

Cross-sectional, descriptive study. *Case 1*: male, 22 years old, BMI 65kg/m², waist and neck perimeter 177cm and 47cm; body fat: 49%; associated diseases: mixed dyslipidemia and depression. He underwent nutritional intervention: low-calorie, normal-consistency diet (1200 kcal/day), plus pharmacotherapy for 5 months. Ten days before surgery, liquid-consistency, very low-calorie diet (800 kcal). *Case 2*: 61-year-old woman, BMI 36.8kg/m²; abdominal perimeter and neck 120cm and 45cm; body fat: 42.9%. Associated diseases: T2DM, hypertension, severe hepatic steatosis with elevated transaminases, mixed dyslipidemia, OSAS, depression. She underwent nutritional intervention: low-calorie, normal-consistency diet (1200 kcal/day) for 2 months. Ten days before surgery, very low-calorie, liquid-consistency diet (800 kcal). Protein supplementation, vitamins and minerals were associated in both cases throughout the preoperative intervention.

Results

Case 1, there was a 33kg body weight reduction in 5 months, with the introduction of a very low-calorie liquid consistency diet, 10 days before surgery, which reduced 10.3 kg with an average of 1.03 kg/day. Intraoperatively, the liver retraction was carried out without difficulty, with full access to the esophageal hiatus. *Case 2*, there was no weight reduction with the low-calorie diet, only with the introduction of the liquid consistency diet, very low-calorie, has got a 3.7kg decrease, mean 0.370 kg/day. Intraoperatively, liver retraction was difficult, due to its size and weight, making it substantially difficult to visualize the hiatus.

Conclusion

We conclude that the variables age, degree of steatosis, associated diseases, body composition, and not just BMI, should be considered in nutritional intervention. BMI is not the only determinant of preoperative nutritional intervention in hepatomegaly, it must be individualized.

Keywords: hepatomegaly, perioperative, nutritional intervention, surgery, metabolic surgery.

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OAGB LENGTHENING SHORT AND LONG-TERM FOLLOW-UP OF 4 CASESFrancisco Javier Barrera Rodriguez - Wilbert Martin García Amaro*Hospital Christus Muguerza Sur / Universidad de Monterrey, Cirugia General, Monterrey, Mexico*

Follow-up of 4 patients with insufficient or weight gain after OAGB was carried out for an average of 2 and up to 10 years after surgery, OAGB was lengthened from an original by an average of 120-200 cm, performing in the second intervention a total count of loops, lengthening the anastomosis to the middle of the counted total bowel. In the short and long-term follow-up, a weight loss of 5kg at 2 months, 14kg at 3 months, 14kg at 8 months, and 53kg at 18 months, respectively, was observed. Revision surgery and lengthening of the OAGB is proposed as an effective therapeutic option.

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OBESITY – THE LAST BASTION OF PREJUDICE IN HEALTH CARE SYSTEMS?

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Background

It is widely recognised that patients with obesity face stigma and prejudice in health systems across the world

Objectives

To determine the perceptions amongst medical students and the consultant work force as regards patients with obesity

Methods

A multiple-choice survey was sent out to medical students and consultants simultaneously in a medical school attached to a university teaching hospital. Respondents provided information on demographics and perceptions of obesity and bariatric surgery. Results were presented as frequencies with comparison of medical student and consultant responses.

Results

There were 215 and 165 student and consultant respondents respectively. 61.3% of student respondents were in years 1-3 and 65.9% were in normal BMI range. 90% of consultant respondents had over 10 years of NHS experience and 46.7% were in normal BMI range. 16.0% students and 1.8% consultants were not aware that obesity is classified as a disease. 23.2% of students and 42.5% of the consultant respondents felt that obesity is a self-inflicted disease. 54.0 % students and 73.4 % consultants agreed that bariatric surgery is an effective treatment for obesity.

Conclusions

Though overall perceptions were positive, a large number of medical students and consultants felt that obesity is self-inflicted and just over 50% of students thought bariatric surgery was effective, indicating the need to include obesity and bariatric surgery in the curriculum in order to change firmly entrenched views around obesity.

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OBESITY AND EMOTIONAL DYSREGULATION: THE NEED FOR A SYSTEMATIC RELATIONAL APPROACH WITH MAI MODEL

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Background

Our work fits within a systemic relational theoretical framework. Specifically, in the intersystem articulation model theorized by Baldascini.

Aim

The aim is to understand what might be the best therapeutic approach for binge obese patients who are not candidates for bariatric surgery in order to make them eligible by reducing the risk of behaviors that could result in postoperative DCA, self-injurious or suicidal acts as reported in the literature.

Methods

By analyzing the scientific literature regarding the predominant characteristics of binge patients, strong impulsivity and emotional dysregulation are easily found. The literature speculates that binge mechanisms can be likened to other impulsive behaviors such as: alcohol and substance abuse, self-harm, kleptomania, and sexual promiscuity. This suggests a blockage of emotional experience and thinking in the face of an intolerable emotional state that would cause a corresponding blockage in present time by precluding the patient from focusing on the consequences of his actions and excluding future time from his experience. These elements led us to consider a parallelism with a block in the intrapsychic instinctive-motor system with respect to the emotional and cognitive systems theorized in MAI by Baldascini. A block in such a system would cause a focus of experience in a present time and the use of the body as a preferred channel for the expression of one's emotional experience. In addition, the relational systemic approach expands family involvement by having as its purpose the building of new ways of relationships and conflict resolution for the creation of a new emotional climate. The exploration of new opportunities with patients' families, allows us to go beyond mere compliance with good behavioral and dietary practices by fostering the construction of new emotional and behavioral responses that are no longer dysfunctional but promoters of a better quality of life.

Results

We therefore believe that relational systemic therapy in the MAI perspective is the most suitable for binge patients as it promotes a harmonization between intrapsychic systems in order to overcome emotional acting out in favor of full and conscious emotionality.

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OBESITY AND HIATAL HERNIA: AN INTRAOPERATIVE AFFAIR

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Background

Hiatal hernia, more frequent in obese population, interfering with bariatric surgery, requires an acceptable standardized diagnosis and commensurate surgical bariatric solution. The obese patient's behavior limits interpretation of symptoms whilst, compliance, costs and risks of a pre-operative, large scale reproducible work-up are burdens to cope with. On the other side the two benchmarks of hiatal hernia repair, cruroplasty and fundoplication, should be aligned to the bariatric operation.

Objectives

Hiatal hernia by a diagnostic path up-to-date, no-compliance dependent, simple and with favorable value for money, safe and reproducible. To propose our technical surgical evolution addressed to a more physiological and anatomical hiatal hernia repair fitting any bariatric procedure and complementary to the gastric banding, our favorite operation.

Methods

In one run, complete intra-operative assessment, under general anesthesia is the answer to the first objective. Endoscopic assessment defines anatomical and pathological state cutting down compliance and endoscopic skills. We measure the diaphragmatic hiatus and the depth of the hernia through an intragastric balloon and a clinch. We repair the hiatus and perform the bariatric operation: hiatus accepting a balloon inflated with 20 cc or/and a hernia depth \Rightarrow 2cm. Our personal technique above the "pars condensa" respects anatomical and physiological structures according to a less invasive surgery. The "pars condensa" maintenance allows the standardized gastric banding technique separating the retro-gastric tunnel from the retro-esophageal crura repair.

Results

2005-2023: 596 laparoscopic hiatal hernia repair "above pars condensa" (HHR-APC) associated to gastric banding without complications. Solution to pre-operative reflux symptoms and incidence of post-operative reflux similar to the other patients receiving gastric banding procedure mainly related to banding adjustment's compliance.

Conclusions

Our experience points out a reproducible intra-operative strategy to propose the more rational solution according to the bariatric operation: 1) exclusively intra-operative, essential assessment; 2) innovative technique to repair the hiatus above the "pars condensa"; 2) reproducibility, safety and efficacy; 3) complementarity to bariatric surgery.

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OBESITY HYPOVENTILATION SYNDROME IN BARIATRIC SURGERY PATIENTS: AN UNDERESTIMATED DISEASE

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Background

Obesity is a known risk factor for obesity hypoventilation syndrome (OHS). However, study on the prevalence and clinical characteristics of OHS among bariatric surgery patients is scarce.

Objectives

To investigate the prevalence of OHS in bariatric surgery patients and to identify its related predictors.

Methods

A cross sectional analysis was performed in the patients undergoing bariatric surgery between March 2017 and January 2020. Anthropometric, laboratory, pulmonary function, blood gas analysis, and polysomnographic data was collected and analyzed.

Results

Of 522 patients, the overall prevalence of OHS was 15.1%, with men (22.8 %) having a greater frequency than women (9.4%) (P, .001). The prevalence increases with obesity severity, from 4.1% in those with body mass index (BMI) ≤ 35 kg/m² to 39.1% in those with BMI >50 kg/m². Of 404 patients with obstructive sleep apnea (OSA), OHS was present in 17.3%, with 9.8% in mild OSA, 10.0% in moderate OSA, and 27.3% in severe OSA. Only 11.4% of patients diagnosed with OHS had no OSA. On logistic regression, BMI (odds ratio [OR]: 1.10; 95% confidence interval [CI], 1.01–1.21; P 5.033), neck circumference (OR: 1.15; 95% CI, 1.03–1.28; P 5.014), serum bicarbonate (OR: 1.39; 95% CI, 1.20–1.61; P 5.000), C-reactive protein (CRP) (OR: 1.04; 95% CI, 1.00–1.07; P 5.034) were independently associated with OHS.

Conclusion

In bariatric surgery patients, OHS presented a high prevalence, especially in men. Higher levels of BMI, neck circumference, serum bicarbonate, and CRP indicated higher risk of OHS.

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ONE ANASTOMOSIS GASTRIC BYPASS AND THE RISK OF GASTRIC STUMP CANCER. LESSONS FROM SURGICAL MANAGEMENT OF PEPTIC ULCER DISEASE

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The popularity of the performance of one anastomosis gastric bypass (OAGB) has been on the rise since its endorsement as a primary procedure by The International Federation for the Surgery of Obesity and Metabolic Disorders (IFSO). However, there are hesitations in application of this procedure due to the existing risk of gastric stump cancer in regions such as the United States where it is yet to be affirmed as a primary bariatric procedure by the American Society for Metabolic and Bariatric Society (ASMBS) and East Asia where there is a high incidence of gastric cancer.

There are many advantages of OAGB that are appealing to the surgeon including its relative technical ease, especially in the super-obese population) for performance compared to that of the conventional Roux-en-Y gastric bypass (RYGB). Concurrently, the newly updated 2021 position statement from the task force team of the IFSO asserts the need for regular postoperative endoscopic monitoring of the gastric stump due to the potential increase in risk of gastric stump cancer. The fact that extended exposure to condensed bile is considered carcinogenic and the high attrition rate for follow up of patients after metabolic bariatric surgery (MBS) should not be overlooked hastily. I intend to review the literature on the history of surgical management of peptic ulcer disease (PUD) and the accumulated data to raise awareness on the importance of long term follow up of patients after OAGB.

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ONE ANASTOMOSIS GASTRIC BYPASS WITH AND WITHOUT INSERTION OF THE MINIMIZER RING®: SAFETY, EFFICACY AND CO MORBID ILLNESS REMISSION

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Background

The one anastomosis gastric bypass (OAGB) is a safe and effective bariatric procedure and gaining in popularity throughout the world. However, obesity is a chronic disease and weight regain occurs despite bariatric-metabolic surgery. The benefit of the addition of a minimizer ring (MMR) on the durability of weight loss for the OAGB remains unclear.

Objectives

To review the safety, efficacy, remission of comorbidities and benefit of the MMR following primary OAGB.

Methods

This was a retrospective analysis of a prospectively collected data base dating between 2016 to 2022. Data are reported as categorical values, mean +/- SD and analysed using parametric statistics. Patients were followed up by our multidisciplinary clinic.

Results

Of the 370 primary patients, 270 female (BMI 50.4 ± 10.1 kg/m²) and 30 male (BMI 48.1 ± 10.6 kg/m²) had OAGB, and 52 female (BMI 48.2 ± 8.6 kg/m²) and 18 male (BMI 52.8 ± 10.9 kg/m²) patients had OAGB+MMR. EWL% at 1,3, and 5 years follow up after OAGB was $77.8 \pm 16.6\%$, $77.8 \pm 18.8\%$, and $75.3 \pm 19\%$, but significantly higher after OAGB+MMR with EWL% of $79.6 \pm 15.8\%$, $88 \pm 10.5\%$, and $87.6 \pm 14.5\%$ ($p < 0.05$, respectively). Remission of comorbidities occurred in 77.4% of patients with type 2 diabetes, 71% with hypertension, 70.8% with insulin resistance, 64.4% with dyslipidaemia, and in 48.6% with non-alcoholic steatohepatitis. There were 10 anastomotic ulcers, 7 anastomotic strictures, 3 small bowel obstructions, one incisional hernia, and one patient with bile acid reflux requiring conversion to Roux-en-Y (RYGB). Three patients required removal of MMR of which one patient required conversion to RYGB and loosening the MMR due to severe reflux, vomiting and dysphagia. The rate of complications was 7.7%. There was no mortality.

Conclusion

Our study showed that primary OAGB results in significant mid-term weight loss with remission of comorbidities and low complication rates. Furthermore, insertion of a MMR results in greater weight loss. Longer follow up is required to ascertain if this translates into less weight regain with addition of the MMR.

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ONE YEAR FOLLOW-UP OF ROBOTIC SADI-S: HIGH PREVALENCE OF VITAMINS DEFICIENCY WITH ROUTINE NUTRITION SUPPORT

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Objectives

To investigate the clinical and nutritional outcomes of single anastomosis duodenal-ileal bypass with sleeve gastrectomy (SADI-S) after one year follow-up.

Setting

The China-Japan Union hospital of Jilin University, Changchun, Jilin, China.

Methods

A total of 50 patients undergoing Robotic SADI-S November 2018 and September 2021 were included in this study. The outcomes of operation, weight loss and remission of metabolic diseases were measured. 50 matched patients received SG at the same time and nutritional data were measured especially.

Results

At 12 months after operation, patients in SADI-S group had a significant lower body weight (74.26 ± 13.30 kg vs. 81.92 ± 15.47 kg, $P < 0.05$) and body mass index (25.20 ± 3.62 kg/m² vs. 28.06 ± 4.14 kg/m², $P < 0.05$) than those in SG group. The percentages of excess weight loss ($107.94 \pm 30.00\%$ vs. $86.09 \pm 21.86\%$, $P < 0.05$) and total weight loss ($41.39 \pm 6.57\%$ vs. $34.51 \pm 8.73\%$, $P < 0.05$) were significantly higher in SADI-S group than in SG group. The SADI-S group had a significantly higher prevalence of iron and zinc deficiency and a significantly lower prevalence of vitamin B12 deficiency than the SG group even with equal vitamins proposals. Notably, 3 patients in the SADI-S experienced anemia, with hemoglobin levels of 94 g/L, 96 g/L, and 99 g/L, respectively; no cases of anemia were observed in the SG group. Only 1 patient in the SADI-S group experienced hypoalbuminemia, with an albumin level of 24.17 g/L.

Conclusion

Long-term malnutrition is the major problems in distal bypass surgery, such as SADI-S. More than normal nutritional support should be mentioned in this group compared with SG. However, SADI-S offers a better outcome in terms of weight loss and remission of obesity-related comorbidities.

Keywords: bariatric surgery; single anastomosis duodenal-ileal bypass with sleeve gastrectomy; sleeve gastrectomy; obesity; Robotic surgery.

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ONE-ANASTOMOSIS GASTRIC BYPASS (OAGB) – OPERATIVE STEPS AND PROGRESSIVE TECHNICAL EVOLUTION

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Background

OAGB was developed 20 years ago as a modification of the MGB. The concept has established itself as the 3rd most common operation worldwide. Through time, based on our results, progressive technical adaptations have been made toward its betterment.

Aim

To portray critical operative steps and highlight progressive technical adaptations to accomplish our current version of a standard OAGB.

Methods

OAGB has been performed in >4000 patients at our Centre. Presentation covers all steps in our standard OAGB which includes: patient positioning, pre-peritoneal analgesia, trocar placement, total small bowel measurement and designation of limb lengths (adjusting degree of hypoabsorption for each patient), gastric reservoir construction, and gastroenteric anastomosis with its antireflux mechanism. Evolution in each through time is emphasized.

Results

Ongoing results confirm similar trends of our long-term follow-up (*Carbajo M, Luque-de-Leon E, et al. Ob Surg 2016*) which has shown excellent degrees of safety and efficacy. Morbidity included perioperative and long-term complications at <3% and 1%, respectively. Highest mean excess weight loss (88%) was attained at 2 years and kept at $\geq 68\%$, 20 years postoperatively. Remission or (at least) improvement of comorbidities was also achieved and maintained in almost all patients.

Conclusions

OAGB has shorter and simpler learning curves than other complex, mixed and hypoabsorptive procedures. However, it has difficulties of its own and needs proper training in order to optimize outcomes. Experience has led to several technical modifications which have made OAGB a robust and sound alternative, now accepted by all major bariatric/metabolic surgery societies.

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OPERATING ON CHILDREN <10Y/O: A SINGLE INSTITUTION EXPERIENCE

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Background

Obesity in children is a severe health problem. About 1 in 10 children in India are obese. When these problems begin in childhood, they often worsen in adulthood and are associated with substantial co-morbid disease states. Bariatric Metabolic surgery is the only viable long-term treatment option for these patients.

Objective

This study aims to determine the number and outcomes of young children (<10 y/o) who had bariatric metabolic surgery at one institution by a single surgeon.

Methods

The data of cases of young children (<10 y/o patients) were identified from a prospectively kept database of patients that had weight-loss surgery at MBRSC. The preoperative patient profile, including age, sex, body mass index (BMI) and co-morbidities, was determined. The types of surgeries, the operative outcome of complications, weight loss and resolution of co-morbidities were reviewed and analysed.

Results

Five cases (01 female and 04 male) of young childhood were reviewed. The average age was 6.83 ± 1.60 years (range 6-10 years), and the average BMI was 49.9 ± 12.6 kg/m². Two patients had a Sleeve gastrectomy (SG), one had One anastomosis gastric bypass (OAGB), and two had Banded sleeve gastrectomy (BSG). There were no operative or short-term complications. One SG patient was revised to Roux-en-Y gastric bypass (RYGB) due to weight regain after one year. There was no mortality in this series at any time. Average total weight loss and percentage total weight loss (%TWL) was 14.9 kgs and 16.4% in 6 months, 18.82 kgs and 20.7% in 12 months. There was resolution of OSA 3/3(100%), Joint pain 1/1(100%) and HTN 2/2 (100%). Nutritional deficiencies were seen in two patients at 12 months but were corrected with additional nutrient supplements.

Conclusions

Bariatric Metabolic surgery is an effective and safe treatment modality for young children with severe obesity. Further studies are required to investigate the long-term effects with a comparative analysis of different bariatric procedures. Follow-up into adulthood will also be highly desirable and informative.

Keywords: Obesity; Young children; Bariatric Metabolic surgery.

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OPTIMAL LIMB LENGTH IN ROUX-EN-Y GASTRIC BYPASSJean-Philippe MmK Magma*CHU UCL NAMUR, Dept Visceral and General Surgery Unit, Dinant, Belgium*

Roux-en-Y gastric bypass (RY-GBP) is quite well an established technique All of us aim at the optimal outcomes of bariatric Surgery that not only are weight loss but also resolution of obesity-related comorbidities, acceptable complication rate, no severe malnutrition nor deficiencies and improved quality of life of our patients.

Thus, considering adequate limbs length measurement is of paramount importance. Hormones like PPY, GLP1, and bile acids have a role in weight loss and resolution of comorbidities.

Sleeve gastrectomy operative technique has been studied intensively and Gastric bypass technique has not changed deeply over time.

Based on scientific evidence, coming from an extensive and meticulous review of the literature of the last 35 years, we present interesting conclusions about the length of each part of the small bowel implicated in the Gastric Bypass.

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OUTCOMES AFTER REVISIONAL BARIATRIC SURGERY: A RETROSPECTIVE STUDY

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Background

The population with obesity reaches about one billion people around the world. In Brazil, the number of overweight people already reaches 60% of the population. Bariatric-metabolic surgery currently presents a more effective result when compared only to clinical treatments against severe obesity. Despite this, some patients may still experience suboptimal outcomes after primary surgery and a revisional approach is indicated. Among the reasons associated with these results, those attributed to the patient or associated with the surgical technique can be highlighted. Therefore, it is necessary to elucidate the aspects related to the outcomes of these patients, aiming at a better understanding of the subject.

Objectives

The objective of this study was to analyze the results after revisional bariatric surgery, such as symptomatic control of gastroesophageal reflux (GER), of dysphagia complaints and the weight loss obtained in the recent postoperative period (up to six months).

Methods

A retrospective study of patients undergoing revisional bariatric-metabolic surgery was carried out by a team composed of surgeons who are members of the Brazilian Society of Bariatric and Metabolic Surgery in a service from 2020 to 2022.

Results

A total of 79 revisional bariatric surgeries were studied. Of these, as previous surgeries, 43 Fobi-Capella (54.43%), 24 Laparoscopic Sleeve Gastrectomy (30.37%), 11 Roux-en-Y Gastric Bypass (13.92%) and 1 Adjustable Gastric Band (1.26%), all of which were converted into Roux-en-Y Gastric Bypass. Patients were mostly female (88.6%) and the mean time between primary and revision surgery was 11 years. The most common complaints related to primary surgeries in the studied sample were weight regain (37.97%), GER (46.84%) and dysphagia (36.71%). It is important to point out that most of the cited complaints overlapped. Postoperative follow-up performed for 6 months showed an average weight loss of 13.85% in patients with weight regain after primary surgery and 100% control of symptoms, in the same period, for GER and dysphagia.

Conclusion

We observed that revisional bariatric surgery can become an effective therapeutic alternative against chronic complications of primary surgery. It is important to maintain adequate multidisciplinary follow-up to optimize results and control complications.

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OUTCOMES FOLLOWING CONCURRENT ROUX-EN-Y GASTRIC BYPASS AND PARAESOPHAGEAL HERNIA REPAIR

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Background

Bariatric surgeons occasionally encounter a paraesophageal hernia (PEH) during preoperative workup for bariatric surgery. Presently, the evidence supporting the safety of proceeding with concurrent Roux-en-Y gastric bypass (RYGB) and PEH repair is limited. We aim to report the outcomes of simultaneous PEH repair and RYGB completed at our institution.

Methods

A retrospective analysis of patients who underwent concurrent RYGB and PEH repair at our institution between 2014-2022 was completed. We reviewed demographics, peri- and postoperative outcomes, and weight loss recorded at 3-, 6-, 12-, and 24-months postoperatively. Outcomes were also compared between robotic and laparoscopic approaches.

Results

33 (median age 65 years, 72.7% female) patients were identified. Median BMI was 40.58 (34.2-53.4) kg/m². Twenty-two (66.7%), and 11 (33.3%), patients underwent either robotic or laparoscopic approaches, respectively. Median length of stay was 2 (1-12) days. Two (6.1%) patients experienced Clavien-Dindo ≥III postoperative complications. Thirty-day mortality was 1 (3%). EBWL% at 3-, 6-, 12-, and 24-month follow-ups were 32.46%, 41.01%, 53.13%, and 57.79%, respectively. 17/32 (53.1%) patients who initially presented with reflux went on to discontinue their anti-reflux medication. Additionally, 15/25 (60%) patients with hypertension and 5/8 (62.5%) patients with diabetes went on to discontinue their antihypertensive and glucose-lowering agents, respectively, following surgery. Finally, 7/16 (43.8%) patients had anatomic evidence of HH recurrence, which was significantly higher in the laparoscopic approach ($p = .003$)

Conclusion

Concurrent RYGB and PEH repair is both safe and feasible. The robotic approach is associated with lower HH recurrence.



Figure 1. TWL% and EBWL% at Different Timepoints.

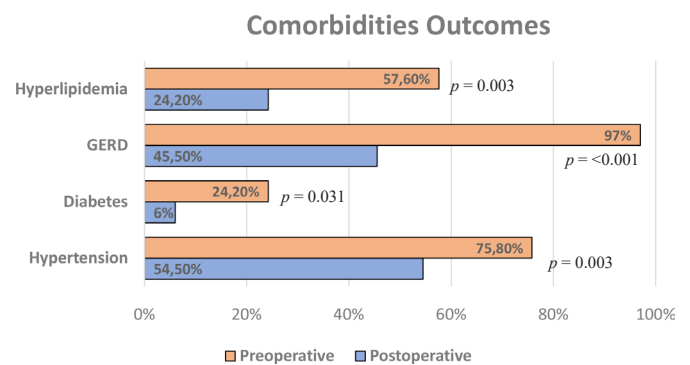


Figure 2. Comorbidities Prevalence at Last Follow-up.

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OUTCOMES FOLLOWING ROBOTIC VERSUS LAPAROSCOPIC SLEEVE GASTRECTOMY

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Background

Robotic approaches have slowly been incorporated into the typically laparoscopic bariatric sleeve gastrectomy. Current literature remains unclear if either approach offers significant benefits and differences in outcome.

Objectives

We aim to describe our short term results in robotic and laparoscopic sleeve gastrectomy, in the largest known UK single-centre study.

Methods

A retrospective, single-center study on the 1-year outcomes of 190 patients who underwent either a robotic (n=26) or laparoscopic (n=164) primary sleeve gastrectomy between January 2016 and January 2022. Demographic, operative and post-operative outcomes including weight loss and complications were analysed. All robotic operations were performed on the da Vinci Si system. Revisional cases were excluded.

Results

There were no statistical differences in patient age and sex. The pre-operative BMI was significantly higher in the robotic group (49.7 vs 44.6 kg/m², p=0.026). There were no statistical differences in the excess weight loss (robotic 62.6% vs laparoscopic 60.5%, p>0.05), length of stay, complication, 30-day re-admission rates and metabolic outcomes including HbA1c and number of diabetes medications at 1 year. The median operative time was 123 (75-170) and 104 (51-192) minutes for robotic and laparoscopic sleeve gastrectomy (p=0.001).

Conclusion

In this single centre study, the robotic technique has shown comparable patient outcomes and safety. However, the operative time was longer when compared to the laparoscopic group, which may reflect a learning curve associated with robot docking or surgical technique. The introduction of the new da Vinci Xi system may improve operative time.

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OUTCOMES IN PATIENTS WITH SUPER-SUPER OBESITY (BMI \geq 60KG/M²) UNDERGOING SLEEVE GASTRECTOMY OR ONE ANASTOMOSIS GASTRIC BYPASS

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Introduction

The data comparing Laparoscopic sleeve gastrectomy (LSG) and One Anastomosis Gastric Bypass (OAGB) in patients with BMI \geq 60kg/m² is scarce.

Methods

Prospectively collected data of 69 patients with BMI \geq 60 kg/m² undergoing LSG or OAGB from January 2008 until December 2021 was analysed retrospectively. The study was conducted at a tertiary care academic institution. Percentage Excess BMI loss, impact on comorbidities and complications were compared in both groups.

Results

Fifty-six patients underwent LSG and 13 patients underwent OAGB. The mean age was 39.5 \pm 12.6 years and 68.1% of them were females. Both the groups were similar in terms of age, sex, BMI and presence of comorbidities. The mean BMI was 62.8 \pm 4.1 and 65.2 \pm 5.74 in the OAGB and LSG groups respectively. The Excess BMI loss percent (%EBMIL) was 46.3 \pm 18.8 %, 52.1 \pm 21.8 %, and 50.2 \pm 17.7 % at 1, 3, and 5 years respectively in the LSG group. The %EBMIL was 44.4 \pm 14.6 %, 58.7 \pm 8.6 %, and 59.7 \pm 6.3 % at 1, 3, and 5 years in the OAGB group. The results were statistically similar at each time point (p>0.05). The mean weight regain was 9.8 \pm 8kg and 16.9 \pm 12.8 kg (p=0.16) in the OAGB and LSG groups respectively. The % Excess BMI regain for OAGB/ LSG groups was 8 \pm 4.2%/ 12.6 \pm 11.1% (p=0.48) at 3 years and 6.45 \pm 6.4 %/ 16.2 \pm 10.5 % (p=0.08) at 5 years respectively. On univariate regression analysis, only OAGB was found to have a negative correlation with weight/ excess BMI regain. Resolution of comorbidities was similar in both the groups. The major complications included bleeding and surgical site infection in one patient each in LSG group and none in the OAGB group. There was one 30-day mortality due to postoperative lower respiratory infection in LSG group.

Conclusion

Weight loss following OAGB and LSG in patients with BMI \geq 60kg/m² is similar in short-mid term. OAGB might be the preferred option in patients with super-super obesity due to trend towards lower weight regain and lesser complications.

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OUTCOMES OF A SWALLOWABLE INTRAGASTRIC BALLOON (ELIPSE™) ON 96 OVERWEIGHT AND OBESE PATIENTS

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Background

The traditional gastric balloons have been used for several years to reduce weight in overweight and obese patients, but the need for sedation and upper endoscopy leading to several limitations. The current series is the first study that evaluates the safety and effectiveness of the swallowable gastric (Elipse™) balloon in our population on the national level.

Methods

Ninety-six patients (mean BMI was $33.6 \pm 4.3 \text{ kg/m}^2$) participated in this study. All patients swallowed one Elipse™ balloon intended to remain in the stomach for 4 months, self-empty, and then pass. Each balloon was filled with 550 mL of filling fluid. Anti-emetics and anti-spasmodic drugs were prescribed for 2–3 days after insertion; proton pump inhibitor was prescribed twice daily 1 week before the procedure and continued until the end of residence time (16–20 weeks).

Results

In the current series, at end of the procedure (after 4 months), the overall mean weight loss (WL) was $11.2 \pm 5.1 \text{ kg}$, mean waist circumference reduction was $10.9 \pm 2.1 \text{ cm}$, and a mean BMI reduction was $4.9 \pm 2.0 \text{ kg/m}^2$. The percentage of total body weight loss (TBWL%) was $12.1 \pm 5.2\%$. The Elipse™ therapy reported improvements in the metabolic parameters investigated.

Conclusion

This swallowable gastric balloon (Elipse™) can be safely and successfully swallowed, filled, imaged, and passed with accepted weight loss and clinical improvement in factors related to the metabolic syndrome.

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OUTCOMES OF BARIATRIC SURGERY ON AUTOIMMUNE DISEASES: SINGLE CENTER EXPERIENCE

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Background

Obesity is a serious disease, with substantial morbidity and mortality. Bariatric surgery has shown to be effective to control diabetes mellitus type 2, hypertension and other obesity-related comorbidities. However, there are no data regarding any possible effect of bariatric surgery on autoimmune diseases and other rare diseases.

Objective

To determine whether weight-reduction surgery can have an effect on autoimmune diseases or not.

Patients and methods

We reviewed the files of 27 patients with autoimmune diseases who underwent bariatric surgery in a bariatric center at an academic hospital and had a minimum of 2-year follow-up. Data collected included general demographics of the patients, type of the procedure, preoperative and postoperative number of medications needed to control the disease.

Results

Patients included 6 patients with rheumatoid arthritis, 7 patients with psoriasis, 4 patients with gout, 4 patients with vitiligo, 3 patient with SLE and 3 patient with multiple sclerosis. Improvement was noticed among the majority of these patients in the form of decreased number of medications (including cortisone) needed to control the disease, decreased number of relapse requiring hospital admissions, prolonged remission and decrease in the number of disease related complications.

Conclusion and Recommendations

Bariatric surgery seems to have a positive role in controlling and improving autoimmune related diseases. Further studies with larger number of patients and longer follow-up are needed to confirm these results.

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OUTCOMES OF ENDOSCOPIC SLEEVE GASTROPLASTY USING A U-PATTERN OF SUTURING FOR TREATMENT OF OBESITY

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Background

Endoscopic Sleeve Gastroplasty (ESG) is an effective and safe medium-term procedure for obesity treatment. A variety of suture patterns have been reported. However, its role is still not consolidated for suture patterns, and the ideal indications are yet to be determined.

Aim

In this study, we aim to assess the safety and efficacy of ESG for treating obesity using a modified U- pattern of suture placement.

Method

We conducted a single-centre retrospective study of obese patients who underwent consecutive ESG at our tertiary care centre. All ESG was performed using a U- pattern with the addition of longitudinal compression suture bite at the anterior surface. Data on weight loss and adverse events at 1, 3, 6, and 12 months were collected and analysed.

Results

165 ESG procedures were included in the final analysis. Ninety-two patients (55.7% female) with a mean age of 39.15 ± 9.16 years and mean body mass index (BMI) of 35.11 ± 4.12 kg/m² underwent ESG. The mean percentage of total weight loss (%TWL) was 18.13% (95% confidence interval [CI]: 16.32–19.17), and the percentage of excess weight loss (%EWL) was 65.61% (95% CI: 50.11–71.18) with 90% of participants-maintaining a %TWL of $\geq 15\%$ and EWL of $\geq 30\%$ at 1years, respectively. Resolution/improvement of comorbidities was 55.5% cases of T2DM, 76.4% cases of hypertension, 69.6% cases of dyslipidaemia and 79.4% remission were in obstructive sleep apnoea. No patient required an emergency intervention, and there was no mortality or significant morbidity.

Conclusion

Our study shows that ESG using a U-suturing pattern resulted in effective weight loss at the short-term follow-up without serious adverse events. ESG technique is evolving, and there is a need for more contributions to the standardisation of various suture patterns.

Keywords: Endoscopic Sleeve Gastroplasty, U-suturing pattern, Weight-loss, Obesity, Standardization.

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OUTCOMES OF ONE ANASTOMOSIS GASTRIC BYPASS IN 472 DIABETIC PATIENTS

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Background

The positive impact of Roux-en-Y gastric bypass (RYGB) on metabolic syndrome and glycemic control has been proven in obese patients. One anastomosis gastric bypass (OAGB) is a simple, effective and easy to learn procedure. OAGB provides encouraging results for the treatment of diabetes obese patients, but does it have the ability to be an alternative procedure to RYGB in the treatment of these patients? The aim of this study is to evaluate the outcomes of OAGB on diabetic obese patients at the bariatric centre of our university hospital. By extension, we evaluated the possibility of BMI and the preoperative antidiabetic medication usage to be predictive factors for postoperative diabetes resolution.

Methods

This is a retrospective single-centre study of 472 diabetic patients who underwent OAGB from November 2009 to December 2015. All patients were followed-up for at least 1 year, and up to 3 years, where available. Weight, HbA1c, and anti-diabetic medications were recorded at base-line, 3, 6, 12, 24 and 36 months.

Results

A total of 472 patients have been followed-up for 1 year and 361 for 3 years. The mean BMI decreased from 46.8 ± 7.2 to 29.5 ± 2.8 kg/m² and HbA1c from 9.6 ± 1.3 to $5.7 \pm 1.5\%$ at the 12-month follow-up. At the 3-year follow-up, the mean BMI was 32.1 ± 3.3 and HbA1c mean was $5.8 \pm 0.9\%$. Diabetes remission was achieved by 84.1% of patients.

Conclusions

OAGB can be an excellent alternative to RYGB for the treatment of diabetes and obesity. Pre-operative medications may be used to predict postoperative diabetes remission, but not BMI.

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OUTCOMES OF SADI AND OAGB COMPARED TO RYGB FROM THE METABOLIC AND BARIATRIC SURGERY QUALITY IMPROVEMENT PROGRAM: THE NORTH AMERICAN EXPERIENCE

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Background

The adoption of sleeve gastrectomy in the last decade aptly reflects the desire of patients and surgeons for alternatives to RYGB and DS. While the sleeve gastrectomy provides excellent outcomes, there is still be a role for other procedures. Recently approved by the MBSAQIP, SADI and OAGB are two procedures that have garnered increasing interest due to their single anastomosis technique.

Objectives

Our goal was to characterize the adoption of these two procedures and examine 30-day outcomes.

Methods

Using the Metabolic and Bariatric Surgery Quality Improvement Program database, we examined laparoscopic cases from 2018-2022 to understand the percentage of primary bariatric surgery cases that are SADI and OAGB. We used coarsened exact matching to match patients who underwent SADI or OAGB to patients who underwent Roux-en-Y Gastric Bypass (RYGB) based on age, BMI, sex, operation length, race, and ASA classification. We examined outcomes of matched patients using Poisson regression.

Results

Preliminary results from 2018-2021 follow. Of the 667,979 patients that underwent laparoscopic bariatric-metabolic surgery, 1,326 (0.2%) underwent SADI, and 2,541 (0.4%) underwent OAGB. SADI was not identified until 2020. In 2020, there were 487 SADI procedure compared to 839 in 2021. From 2018-2021, the number of OAGB procedures went from 149 to 940. Compared with RYGB, SADI was associated with higher incidence of anastomotic or staple line leak [IRR:2.19 (95%CI: 1.07-4.48)], and sepsis [IRR:3.61 (95%CI: 1.62-8.06)], but lower incidence of emergency room visits [IRR:0.72 (95%CI: 0.60-0.87)]. Compared with RYGB, OAGB was associated with lower incidence of superficial incisional infections [IRR:0.29 (95%CI: 0.12-0.71)], ICU admission [IRR:0.37 (95%CI: 0.18-0.74)], gastrointestinal bleeding [IRR:0.29 (95%CI: 0.29-0.39)], and bowel obstruction [IRR:0.10 (95%CI: 0.02-0.39)]. Of note, there were no differences between these procedures and RYGB for 30-day mortality.

Conclusion

More SADI and OAGB procedures are being performed in recent years and have increased in the proportion of primary bariatric-metabolic procedures. In this early phase, OAGB had lower incidence of complications compared to RYGB. However, there was a higher rate of complications with the SADI procedure. Further studies will be needed to better understand the key drivers for these outcomes.

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OVER TEN YEARS OF GASTRIC ENDOPLICATION: WHAT HAVE WE LEARNED?

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Purpose

Obesity is a growing issue worldwide, whose causes and consequences are linked to the environment and which therefore has a high carbon footprint. On the other hand, obesity surgery, along with other procedures in surgical suites, entails environmental consequences and responsibilities.

Material and Methods

We conducted a prospective comparative study on two groups of bariatric interventions (N = 59 and 56, respectively) during two consecutive periods of time, first without and then with specific measures aimed at reducing greenhouse gas emissions related to bariatric procedures by approximately 10%.

Results

These measures included recycling of disposable surgical equipment, minimizing its use, and curbing anesthetic gas emissions.

Conclusion

Further and continuous efforts/incentives are warranted, including reframing the surgical strategies. Instead of comparing measurements, which is difficult at the present time, we suggest defining an ECO-SCORE in operating rooms, among other healthcare facilities.

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PAIN MANAGEMENT AFTER BARIATRIC SURGERY
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Background

Many policies and guidelines are available to decrease post operative pain, yet we still try to find the best of each. Traditional opioids use weather when there is pain or at fixed times, patient-controlled analgesia PCA, transversus abdominis plane TAP block and rectus sheath block RSB among these polices.

Objective

Comparison between different modalities of pain management.

Methods

Observational study include 60 patients 41 female and 19 males; their age 19-61 (39.7 ± 12.7 years) divided into three groups of patients treated by different modalities (all received acetaminophen and Acupan) while the differences in Group (A) received opioid on regular bases, Group(B)received PCA while Group (C)has combination of TAP and RSB block .Pain assessed using numerical and visual analogue score recorded with measurement of vital sign.

Results

The NAS in group A 4-10 (7.4 ± 1.85) while in group B 6-10 (8.75 ± 1.25) and in group C 0-6 (3.3 ± 1.84). The VAS in group A 4-10 (6.8 ± 1.74) while in group B 6-10 (8.05 ± 1.64) and in group C 0-5 (3 ± 1.52). These results show statistically significant difference between group A and B with a p value of 0.0102 and between group A and C with a p value 0.0001 which means extreme statistically significant difference.

Conclusion

This study shows that the best way to minimize post operative pain and prevent patient suffering is combination of TAP and RSB block followed by using opioid regularly and the least effective is PCA.

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PATIENTS WITH BARIATRIC SURGERY: URGENT NEED FOR ACCURATE REGISTRATION OF THE CONTRAINDICATION TO ENABLE SAFE PHARMACOTHERAPY IN HOSPITAL AND PRIMARY CARE

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Background

To enable the use of automatic clinical decision support for pharmacotherapy in patients with bariatric surgery, it is necessary to register the contraindication “bariatric surgery” in the hospital, general practitioner (GP), and community pharmacy electronic health record systems (EHRs). A contraindication is defined as a patient’s feature based on which a drug should be avoided or the dose of the drug adjusted accordingly. It is coded in an unambiguous and comprehensive way as structured data into the EHRs used by physicians and pharmacists.

Objectives

The aim of this research was to quantify the correct registration of this contraindication in hospital, GP, and community pharmacy records. Furthermore, we investigated whether the registration status in primary care was dependent on the registration status in the hospital.

Methods

From patients who underwent bariatric procedures performed in the Albert Schweitzer Hospital (Dordrecht, the Netherlands) between 2018 and 2021, the percentage of registered contraindications in hospital medical records was assessed. Due to feasibility reasons, a subset of the patients’ data was created for assessing the percentage of registered contraindications in GP and community pharmacy records.

Results

Out of 664 patients who underwent bariatric surgery, the contraindication bariatric surgery was registered in 69.1% of the cases. Out of 552 patients, 28.3% and 25.1% were correctly registered in GP and community pharmacy records, respectively. There was no correlation between registration status in the hospital EHR and registration status in GP practices or community pharmacies.

Conclusion

The percentage of correct registration of bariatric surgery in hospital, GP, and community pharmacies is low. To avoid doctors prescribing and pharmacists dispensing drugs to patients with bariatric surgery without knowing that they have undergone this procedure, better registration of the contraindication is required to enable optimal use of clinical decision support systems for the pharmacotherapy of patients after bariatric surgery.

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PERIOPERATIVE ENDOSCOPIC FINDING OF HILL II: WHEN TO EXPLORE?

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Background

Hiatal hernias are characterized by a protrusion of the stomach into the thoracic cavity through a widening of the diaphragm crus, causing gastroesophageal reflux (GERD). In obese patients undergoing bariatric surgery the presence of Hiatal Hernia (HH) could be asymptomatic. Preoperative upper gastrointestinal endoscopy is the most frequently used method to determine the presence of hiatal abnormalities, being the Hill Classification the most commonly used. Notwithstanding, evidence to decide to explore hiatus during bariatric is still scarce.

Objective

To describe the patients endoscopically classified as Hill II and identify the association of Hill II with intraoperative findings of Hiatal Hernia.

Methods

A retrospective observational study with a prospective database was conducted from January to December of 2022. All patients who underwent bariatric procedure with intraoperative or preoperative Upper Gastrointestinal endoscopic Hill Type II were included. Endoscopic results were compared to surgical findings. Descriptive analysis, Chi2, and predictive values were calculated.

Results

out of xx 193 patients were included from January 1st to December 31st of 2022. All classified as endoscopic Hill II. 8.8% were males and 92.8 % were females. Mean age 41.41 ± 9.6 . 25 Patients had history of GERD. 9.8 % had history of Type II diabetes. Mean body mass index in the group was 41.94 kg/m² before intervention. Procedures were 117 sleeve gastrectomy, 71 RYGB and 5 OAGB. 85 HH were documented, all were repaired laparoscopically. In our population, type II Hill Classification patients had an incidence of hiatal hernia of 44.04 %. A positive association was found if patients had history of GERD, OR 3.27 (IC 95 % (1.28-7.65). 2 patients presented postoperative bleeding without need of reintervention not related to the HH repair.

Conclusion

It seems to be that patients with preoperative endoscopic finding of Hill Type II and history of GERD should undergo hiatal exploration. Nevertheless, prospective studies are needed to validate our results.

Keywords: Obesity, Gastric Bypass, Sleeve gastrectomy, Hiatal Hernia, Endoscopy, GERD.

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PERIOPERATIVE MUSIC IMPLEMENTATION IN BARIATRIC PATIENT CARE: AN IMPLEMENTATION STUDY

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Background

Perioperative music can have a beneficial effect on postoperative pain, the opioid requirement, and anxiety. The beneficial effects are even present when music is played solely during general anesthesia. The present study aims to assess the effect of the implementation of perioperative music in elective bariatric surgery as part of standard surgical patient care.

Methods

This is a prospective, single-center implementation study comparing pre- and post-implementation groups. The pre-implantation group doesn't receive music at the surgical complex. The post-implantation group will receive perioperative music. We aim to include 130 patients whereby we include 65 patients in each group. Patients undergoing elective bariatric surgery (primary banded Roux-en-Y gastric bypass) qualify as participants. The primary outcome was the postoperative pain score on a 10-point scale. Secondary outcomes consisted of the postoperative nausea, opioid requirement, complication rate and duration of hospital admission.

Preliminary results

Starting from March 2023 we have included 22 patients in the pre-implementation group (without music). Of these patients 18 were female (81.8%). A mean NRS of 5.2 was reported by the patients regarding pain on the first postoperative day. Patients reported on average a score representing moderate nausea (0.63). All patients indicated that they would want to have music for a subsequent surgical procedure. Inclusion of the remaining patients will follow in the next 4 months.

Conclusion

The postoperative pain scores reported by the current pre-implementation group is comparable to the literature regarding bariatric surgery. It is hypothesized that the pain and nausea scores will be lower in the group receiving the perioperative music intervention.

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PERIOPERATIVE OUTCOMES AND HEALTHCARE COSTS IN PATIENTS WITH ADVANCED RENAL DISEASE UNDERGOING BARIATRIC SURGERY

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Background

Bariatric surgery is safe and effective for patients with obesity. As the prevalence of chronic kidney disease (CKD) this patient population rises, there is an increasing need to understand the safety of bariatric surgery for patients with advanced CKD. The aim of this study is to evaluate post-operative outcomes and healthcare utilization in patients with advanced CKD who undergo bariatric surgery.

Methods

A retrospective analysis of the Healthcare Cost and Utilization Project National Inpatient Sample (NIS) was performed. Patients with severe obesity who underwent bariatric surgery from October 2015 to December 2019 were included. Outcomes were compared between patients without CKD, patients with CKD (stages 3 and 4), and patients with end-stage kidney disease (ESKD). Univariate and multivariable logistic and linear regression was used to determine the association between perioperative outcomes to renal status.

Results

A total of 140,758 bariatric procedures documented in the NIS database were included (98.6% non-CKD, 1.1% CKD, 0.4% ESKD). Adjusted analysis revealed no difference between non-CKD, CKD, and ESKD patients for incidence of mortality or postoperative complications. The ICU admission rate was significantly higher for patients with CKD compared to non-CKD patients (odds ratio 4.21, 95% CI [3.29-5.39]). Length of stay was longer for patients with CKD (mean difference (MD) 0.14 days, 95% CI [0.04, 0.23]) and patients with ESKD (MD 0.27 days, 95% CI, [0.10, 0.43]) compared to non-CKD patients. Patients with ESKD had higher admission costs compared to non-CKD patients (MD \$1982.65, 95% CI [677.07, 3288.22]).

Conclusion

Patients with CKD and ESKD have increased healthcare utilization and higher rates of ICU admission after bariatric surgery compared to non-CKD patients. Otherwise, there is no significant difference in other post-operative complications and mortality. Bariatric surgery may therefore be safely offered to this patient population in hospitals with on-site ICU capacity.

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PERIOPERATIVE OUTCOMES USING SINGLE-FIRE STAPLER

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Introduction

There is no consensus approach to performing a laparoscopic sleeve gastrectomy (LSG). Much of the variability and decision-making intraoperatively involves stapling, and the staple line. The Titan SGS single-fire stapler hopes to eliminate variability and simplify the procedure. The stapler is both safe, and effective. Here, we aim to further elucidate the effectiveness in one of the largest cohorts reported to date.

Methods

A retrospective chart review was performed on patients undergoing LSG using the Titan Stapler. Pre-operative demographics, perioperative findings, the procedure performed, and postoperative complications were all abstracted and stored in our prospectively maintained database. To date, we have completed 1050 cases. Data regarding these additional patients are to be included in the near future.

Results

572 patients >18 years old that underwent LSG using the Titan stapler starting September 2021 were evaluated in our preliminary data. There were 445 female and 127 male patients. The average age was 46 ± 12 years. The average preoperative BMI was 46.1 ± 8.1 . The average operative duration was 58 ± 30 minutes. There were four postoperative complications requiring intervention including two staple-line leaks and two staple-line bleeds. No postoperative port site hernias were encountered.

Conclusions

Here we report our preliminary data on patients undergoing vertical sleeve gastrectomy using the Titan single-fire stapler since its implementation in our practice. We again demonstrate similar leak and bleeding rates as those published in the literature. A total of 1050 patients have since undergone LSG using the Titan, making this one of the largest cohorts of patients published to date.

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PETERSEN'S HERNIA RISK FACTORS AND PREVALENCE AFTER LAPAROSCOPIC GASTRIC BYPASS

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Background

After a laparoscopic gastric bypass procedure, the incidence of developing an internal hernia range from 0.5% to 11.5%. They typically manifest between 6 and 24 months after the intervention; however, there have been reports of them manifesting as early as 1 week after surgery or as late as 6 years later. Various risk factors related to the clinical characteristics of the individual, the surgical technique employed, the closure or non-closure of mesenteric gaps, the suture material employed, and the post-surgical weight loss, among others, have been identified.

Objective

To determine the prevalence of Petersen's hernia and its risk factors after laparoscopic gastric bypass.

Material and methods

From January 2015 to December 2020, patients who underwent laparoscopic gastric bypass were included in a retrospective cohort study. Using an antecolic and retrogastric configuration, a single surgeon performed all procedures. Weight, Body Mass Index, Mesenteric Gap Closure, Suture Material Used, and Post-Surgical Complications were study variables.

Results

There were 100 patients, 64 females and 36 males, with a mean age of 40 ± 2.08 years. Petersen's space hernia was 3% prevalent, with a mean presentation time of 18 7.54 months. All patients underwent reoperation, with non-absorbable suture material used to reduce the content and close the mesenteric gap.

Conclusion

The development of a hernia is dependent not only on the closure of the mesenteric gap, but also on the loss of weight and volume of the mesentery upon reopening of the space.

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PHMETRY AS A PREDICTOR OF GASTROESOPHAGEAL REFLUX IN PATIENTS UNDERGOING SLEEVE GASTRECTOMY

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Background

Obesity is a chronic disease with a complex etiology and high prevalence worldwide. It is currently considered one of the leading social and public health problems of the 21st century. Sleeve gastrectomy (SG) is a well-established, commonly employed procedure to treat obesity, with high effectiveness in weight loss and resolution of comorbidities. However, one controversial aspect is its relationship with gastroesophageal reflux disease (GERD).

Objective

We aimed to test pHmetry as a predictor of GERD in patients one year following an SG.

Methods

This retrospective observational study examined the medical records of 190 patients (87.9% females; 41.3±9.5 years) who underwent an SG between 2018 and 2021. There were 125 (65.8%) patients with obesity class II and 60 (31.6%) in class III. We noticed 40.8% had hepatic steatosis, 36.8% hypertension, 31.4% hyperinsulinemia, and 23.6% type 2 diabetes *mellitus*. Upper gastrointestinal endoscopy and 24-hour esophageal pHmetry were employed in tests.

Results

One year after surgery, patients weighted 69.5±11.8 kg, 40.8% were eutrophic, 51.8% overweight, and 6.3% had obesity class I. Pre- and postoperative upper gastrointestinal endoscopy detected mild gastritis in 28% and 8.7% of patients, esophagitis grade A in 11.3% and 9.3%, and normal exams in 25.3% and 18.7%, respectively. By comparing our study groups (50% with pHmetry and 50% without it), we observed that, during one year of monitoring, the GERD symptoms and GERD-Q scores were positive in 31.5% vs. 68.5% and 29.4% vs. 70.6% of cases, respectively. Esophagitis grade A was 40% vs. 60%, esophagitis grade B was 33% vs. 66%, and hiatus hernia was 4.8% vs. 51.2%, respectively. All patients with grades C and D in esophagitis were from the group without pHmetry.

Conclusions

Normal pHmetry monitoring during the preoperative period of SG did not rule out the chance of developing GERD, but it possibly minimized the incidence of postoperative GERD.

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PLASTIC SURGERY FOR BODY SHAPING AFTER BARIATRIC SURGERY – EXPERIENCE FROM A TERTIARY HOSPITAL IN GREECE

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Background

Obesity is a disease rather than a state, and metabolic bariatric surgery (MBS) is its most effective treatment. Body contouring surgery (BCS) is the essential next step after MBS, provided that the body mass index (BMI) has stabilized for an adequate period of at least 6-18 months, according to guidelines.

Objectives

To document the current status of BCS following MBS according to data from one of the highest-volume hospitals of Greece.

Methods

We recruited patients from the Bariatric and Plastic-Reconstructive Surgery registries who had undergone both MBS and BCS and invited them to answer a structured questionnaire with components on demographics, safety and effectiveness of previous operations, quality of life (QoL), body image, social activity, sexual activity, and doctor-patient communication.

Results

Twenty-four patients participated in the survey (response rate 88.1%). The mean BMI pre-MBS was 43.8 Kg/m², and pre-BCS was 28.6 Kg/m². Based on the Bariatric sub-cohort, only 2.5% of post-bariatric patients underwent BCS. The mean interval between MBS and BCS was 2.9 years. The distribution of patients by MBS was as follows: sleeve gastrectomy 8 (33.3%), gastric band 7 (29.2%), gastric bypass 5 (20.8%), and gastric plication 2 (8.3%). The distribution of patients by DCS was as follows: abdominoplasty 23 (94.7%), breast contouring 8 (33.3%), thigh contouring 3 (12.5%), and arm contouring 5 (20.8%). Most positive components (70.6%) regarding QoL were appraised by >80% of the participants, indicating overall satisfaction after BCS. Conversely, only 12.5% of negative components were endorsed by >20% of patients.

Conclusion

BCS has a low prevalence after MBS, although it is related with improved quality of life and body image. A more active participation of Plastic Reconstructive surgeon in the bariatric multidisciplinary team may increase the prevalence of BCS. A larger scale research is required to yield valid conclusions on a national basis.

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PNEUMOPERICARDIUM AS AN UNUSUAL LONG-TERM COMPLICATION OF ROUX-EN-Y GASTRIC BYPASS

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Objectives

To present a case of gastro-pericardial fistula as an exceptional complication after Roux-en-y gastric bypass.

Material and methods

Review of medical history.

Results

We present a 50yo woman with a history of RYGB in 2007 with an BMI of 40kg/m² and a history of parenteral drug addiction developed after surgery. Complications include the appearance in 2016 of an ulcer in the G-G anastomosis, which conditions multiple episodes of upper GI bleeding, a G-G fistula and Barrett's esophagus. Given the diagnoses, surgical treatment was offered, which the patient rejected. In February 2023, she was brought to the emergency department due to a decrease in the level of consciousness. A chest X-ray showed an imaged of pneumomediastinum. An scan revealed a significant pericardial effusion associated with pneumopericardium, as well as migration of the gastric reservoir to the posterior mediastinum and signs of pulmonary embolism, it also suggested the presence of a G-G fistula, as well as hypoperfusion of the gastric reservoir, without free fluid or pneumoperitoneum. It was decided to place 2 chest drains and a pericardial drain, from which purulent material is obtained. An urgent gram study was positive and antibiotic and antifungal coverage was started. In the urgent endoscopy, the presence of long Barrett's esophagus (C10M10) with signs of chronic ulceration a large orifice that provides access to the gastric remnant, and a small anterior fistula with bubbling, suggestive of a gastro-pericardial fistula. During the process, the patient had a second cardiac arrest requiring cardiopulmonary resuscitation. Finally, the case was oriented as septic shock secondary to pericardial empyema due to gastro-pericardial fistula. During the first 48 hours, the patient had a correct evolution, with withdrawal of vasoactive drugs and extubation. Sequential two-stage surgery was offered, which the patient and legal tutor refused. On the fifth day, the patient presented respiratory deterioration, resulting in death.

Conclusions

Gastro-pericardial fistula is a very unusual complication after bariatric and esophago-gastric surgery. Its initial clinical suspicion is difficult given its late onset and the few cases described in the literature. Surgical treatment presents a high risk of complications, requiring a multidisciplinary approach and support.

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POST SLEEVE GASTRECTOMY LEAKS: SINGLE CENTER EXPERIENCE & ALGORITHM OF MANAGEMENT. REVIEW OF CURRENT LITERATURE

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Introduction

Staple-line leak after sleeve gastrectomy is a challenging complication with difficult management. With advancement of endoscopy, self-expanding covered stents are more commonly used.

Objective

To determine the efficacy and safety of non-migratory stents after sleeve gastrectomy leak and to determine an algorithm plan for the management of gastric sleeve leaks.

Patients and Methods

Between January 2014 and June 2016, 24 patients presented to our hospital with post sleeve gastrectomy leaks (6 from our hospital and 18 from other hospitals). CT scan and endoscopy assessed leaks. Treatment included NPO, TPN, Endoscopic Stent insertion +/- CT-guided or laparoscopic drainage of big collections if present.

Results

Patients were followed up as inpatient and outpatient. Two patients were lost for follow-up after discharge. 21 patients improved well, tolerated the procedure and were discharged in a mean of 25 days after the stenting and one patient is still in hospital. Two patients have their stent removed earlier because of migration. The main side effect was prolonged nausea and vomiting (14 patients). Stents were removed after average of six weeks with no major complications. An algorithm of management was also created to treat similar cases in the future.

Conclusion

Endoscopic stenting is a safe and effective tool in post sleeve gastrectomy leaks. Patients may need co-management with CT-guided or laparoscopic drainage if large collections were found. Further studies with larger number should be considered to emphasize these results.

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POST SLEEVE GASTRO-BRONCHIAL FISTULA: MULTIDISCIPLINARY MANAGEMENT

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Background

Gastric fistula is a common complication of bariatric surgery that requires multidisciplinary management.

Objectives

We here describe the treatment of a patient who developed broncho-gastric fistula after sleeve gastrectomy initially unsuccessfully treated by endoscopic prosthesis placement.

Methods

Clinical case will be presented in an interactive way by using videos of endoscopic procedures and CT scan imaging. Data about surgical and endoscopic management as well as nutritional management, physiotherapy and microbiological findings and their treatment will be reported.

Results

A creative but effective multidisciplinary, non surgical, management resulted in the complete resolution of this complex case of a broncho-gastric fistula.

Conclusion

Coordination and multidisciplinary are the keys of an effective treatment of this not uncommon surgical complication.

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POTENTIAL CANDIDATES FOR SLEEVE GASTRECTOMY IN MEDICAL STUDENTS OF A PRIVATE UNIVERSITY IN PARAGUAY

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Background

Considering the growing numbers of obesity it is expected to have more number of candidates for bariatric procedures such as sleeve gastrectomy.

Objectives

This study reports the frequency of students of medicine of a private university in Paraguay, who were potential candidates for sleeve gastrectomy.

Methods

This is an observational, descriptive, cross-sectional study. The sample consisted of 153 medical students from the María Auxiliadora University of Paraguay who were surveyed during the month of March 2023. The variables were sex, age, BMI, comorbidities, and the presence of GERD symptoms.

Results

10.1% of those surveyed were candidates for sleeve gastrectomy, corresponding to 15 of 148 students with grade III obesity or grade II obesity plus comorbidities such as hypertension, diabetes mellitus, OSAS or dyslipidemia, excluding those with GERD symptoms.

Conclusion

As the prevalence of obesity continues to grow, so will the number of candidates for bariatric procedures. In this sense, the sleeve gastrectomy is an interesting option for weight reduction and control of comorbidities, mainly in young patients and in those who do not have GERD symptoms. The results of this study highlight the importance of establishing quality initiatives focused on strategies for weight loss in order to improve the health status.

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PREDICTIVE FACTORS OF INSUFFICIENT WEIGHT LOSS FOLLOWING BARIATRIC SURGERY

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Background

Bariatric surgery is the most effective treatment for morbid obesity. However, a significant number of patients show insufficient weight loss after surgery. The aim of this study is to investigate predictive factors affecting insufficient weight loss following bariatric surgery.

Methods

This is a single-center, retrospective study and we reviewed 65 patients who underwent bariatric surgery for morbid obesity or uncontrolled diabetes mellitus between March 2019 and April 2022. We divided patients into two groups according to the percentage of excessive weight loss(%EWL) at 1 year; Group A (insufficient weight loss group; %EWL<50) and Group B (sufficient weight loss group; %EWL ≥50).

Results

Of 53 patients, 13(24.5%) were in Group A and 40(75.5%) were in Group B. The preoperative median body mass index(BMI) was 37.0 kg/m² (range 30-53kg/m²) and median %EWL at 1 year was 73.3% (range 11.5-154.6%). In multivariate analysis, preoperative BMI ≥40 ($p=0.000$) and early follow-up loss before 6 months after surgery($p=0.001$) were significant risk factors for insufficient weight loss following bariatric surgery.

Conclusion

Higher preoperative BMI and early follow-up loss are significantly associated with insufficient weight loss following bariatric surgery. Therefore, patients with risk factors of worse outcome should be carefully followed up and proper postoperative support is required.

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PREDICTORS OF ANEMIA RECOVERY IN PATIENTS WITH PRE-EXISTING ANEMIA UNDERGOING BARIATRIC-METABOLIC SURGERY

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Background

Bariatric-metabolic surgery is the most effective treatment for obesity, though postoperative nutritional issues, such as anemia, remain problematic. While predictors of postoperative anemia have been well studied, predictors of recovering from anemia in individuals with pre-existing anemia at the time of bariatric-metabolic surgery remain underexplored.

Objectives

The current study in individuals with pre-existing anemia examined the incidence of, and protective factors associated with, anemia recovery up to five years after bariatric-metabolic surgery.

Methods

A retrospective analysis of data from the Ontario Bariatric Registry (OBR) was conducted on patients that received a primary bariatric procedure between January 2010 and June 2020. The OBR is a multicenter, province-wide bariatric database in Ontario, Canada. The primary outcome was recovery from preoperative anemia at any follow-up time from six months to five years post-surgery. A binary logistic regression model was created to quantify the association between predictor variables and recovery from anemia.

Results

A total of 1871 patients with preoperative anemia were identified. Of these, 1311 (70.1%) recovered from anemia within five years of bariatric-metabolic surgery. Female sex, older age, and greater weight loss were associated with higher odds of anemia recovery. In contrast, lower baseline hemoglobin was associated with lower odds of recovery. Procedure type conferred no effect.

Table 1. Postoperative Odds of Recovering from Anemia.

	Odds Ratio (95% CI)	p-Value
Females	1.53 (1.11-2.11)	0.01
Age (Years) (Base <35)		0.04
35-44	1.02 (0.75-1.39)	0.91
45-54	1.52 (1.07-2.15)	0.02
55-64	1.53 (0.99-2.37)	0.06
65+	1.18 (0.52-2.68)	0.70
Weight Loss (Kg/m²) (Base=Lost ≥ 0 and <10)		0.01
Lost ≥ 10 & <20	1.30 (1.01-1.68)	0.04
Lost ≥ 20 & <30	2.95 (1.53-5.71)	0.00
Lost 30+	2.70 (0.26-27.78)	0.41
Baseline Hemoglobin (g/L) (Base=0-10 - Normal)		<.001
11-20 - Normal	0.51 (0.38-0.68)	<.001
21-30 - Normal	0.61 (0.37-1.00)	0.05
31-40 - Normal	0.40 (0.18-0.88)	0.02
41+ - Normal	0.26 (0.06-1.15)	0.08

Conclusion

The majority of patients with pre-existing anemia that underwent bariatric-metabolic surgery recovered from anemia within five years. Recovery from anemia is influenced by age, sex, weight loss, and preoperative baseline hemoglobin.

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PREDICTORS OF EARLY REMOVAL OF INTRA-GASTRIC BALLOON SECONDARY TO INTOLERANCE: A MULTIETHNIC ASIAN COHORT

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Background

Intragastric balloons (IGBs) have been shown to be safe and effective in treating obesity and its metabolic complications. They are reversible and anatomy-preserving unlike metabolic-bariatric surgery (MBS). Balloon intolerance, characterised by refractory nausea, vomiting and abdominal discomfort, is a frequent problem that results in early balloon removal.

Objectives

Our study aims to identify predictors of balloon intolerance and early removal, which will help to guide patient selection for this intervention and peri-procedure care.

Methods

We conducted a retrospective cohort study of 54 consecutive patients who underwent IGB insertion from July 2017 to July 2022 in a single tertiary institution in Singapore. Forty-seven (87.0%) patients completed therapy, while 7 patients (13.0%) had early removal of the balloon due to intolerance. Characteristics of both groups were compared.

Results

We found that after adjusting for age, gender, ethnicity, height, nulliparity, balloon type and volume; depression ($p=0.012$) and anxiety ($p=0.001$) were statistically significant associated with early balloon removal. While univariate logistic regression revealed only anxiety to be statistically significant ($p=0.004$).

Conclusion

Identifying predictors for balloon intolerance and early removal allows for improved patient selection for the procedure. In patients with a history of depression or anxiety, it is important to ensure adequate counselling and preparation prior to balloon insertion. It is also worthwhile to consider admitting these patients for monitoring after IGB insertion instead of performing it as an ambulatory procedure.

Table 1. Predictors of early removal of intragastric balloon due to intolerance (univariate logistic regression).

	Early Removal (n=7)	Completed Therapy (n=47)	Odds Ratio	95% Confidence Interval	P value
Nulliparous, n (%)	3 (60.0)	21 (65.6)	0.786	0.114-5.425	0.807
Depression	1 (14.3)	10 (21.3)	0.617	0.066-5.731	0.671
Anxiety	4 (57.1)	6 (12.8)	9.111	1.624-51.124	0.004*
Other psychiatric disorders	0	5 (10.6)	0.515	0.026-10.320	0.665
Anti-depressant	2 (28.6)	5 (10.6)	3.36	0.511-22.104	0.207
Anti-psychotics	1 (14.3)	5 (10.6)	1.400	0.139-14.120	0.775
Type II diabetes mellitus	0	9 (19.2)	0.270	0.014-5.159	0.385
Proton pump inhibitor	3 (42.9)	19 (40.4)	1.105	0.222-5.509	0.903

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PRELIMINARY EXPERIENCE OF LAPAROSCOPIC SLEEVE GASTRECTOMY IN ADOLESCENTS AND OBESE CHILDREN

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Background

Pediatric obesity is a public health problem associated with co-morbidities, social and psychological problems that required treatment. Bariatric surgery is increasingly considered for the treatment of adolescents and obese children with concern about safety and efficacy.

Objective

To assess and analyze the results and safety outcomes of morbid obese adolescents and children undergoing bariatric surgery.

Methods

Prospective study enrolled 83 adolescent and child referred from pediatrician undergoing bariatric operation (according to the guidelines) in the form of longitudinal sleeve gastrectomy LSG; change in body weight, life style, BMI and complication were analyzed.

Results

83 obese adolescent and child underwent LSG; 36 males (43%) and 47 females (57%). Initially their age between 8 -19 years (15.7 ± 3.2 years), the weight is variable between 82-174 kg (106.2 ± 9.4) while BMI 35.2 - 62.1 (45.9 ± 7.2 kg/m²); the average weight loss assessed and found to be (97.7, 85.1, 77.2, 65) in 1st, 3rd, 6th and 12th month interval; the average of BMI reduced from 45.9 to 40.1, 35.7, 29.24 and 23.14 at 1st, 3rd, 6th and 12th months interval. The quality of life assessed depends on bariatric analysis and reporting outcome system after surgery ; the outcome is excellent. The associated co-morbidity cured or improved; DM (9/10) cases 3 of them resolved and six improved; hypertension seven cases over 8 case cured (87.5%) and one improve; obstructive sleep apnea OSAS 23 cases all of them completely resolved (100%); irregular cycle and hormonal disturbance improving in 77,7% (7/9); (11/11- 100%) cases of nocturia resolved. No mortality or life-threatening complication were recorded

Conclusion

Bariatric surgery is an effective means to treat obesity and its related morbidity in the adolescent; Results have been satisfactory and justify confirming the safety and efficacy of bariatric surgery in the adolescent population.

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PRELIMINARY MANAGEMENT PROTOCOL OF THE OBESE PATIENT SIMULTANEOUSLY CANDIDATE FOR LIVER TRANSPLANTATION AND BARIATRIC SURGERY: REVIEW OF THE LITERATURE AND FIRST FIVE CASES

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Background

Obesity is increasingly common in both liver transplant candidates and recipients and has a significant impact on perioperative morbidity and mortality and on transplant cost. Optimal management remains unclear.

Objectives

The aim of this poster is to add data to the literature through the small newborn experience of managing the candidate patient for bariatric surgery and liver transplantation. The second objective is to identify the most correct timing of the 2 procedures in each individual case and which bariatric intervention is more appropriate to do

Method

we proceeded with a literature review. At the ASST Niguarda since 2020, the collaboration between transplant surgery and oncological and minimally invasive surgery was born for the application of bariatric surgery in obese patients with indications for liver transplantation. The goal of the collaboration has been from the beginning the possibility of a multidisciplinary approach to an extremely complex and fragile patient.

Results

There are currently 5 patients who have undertaken this process (3 men and 2 women) with an average age of 52 years. In 3 out of 5 cases the patients underwent SG surgery at the same time as the liver transplant with an average operating time of 480 minutes. In a single case following the time of the transplant the anesthetist decided in accordance with the preliminary management protocol to discourage sleeve gastrectomy because the patient had undergone massive transfusion. In a single patient, SG was performed in the context of an atypical resection of HCC (R0) with a weight loss of about 23 kg at six months so as to allow the patient to be subjected to liver transplantation.

Conclusion

The protocol we propose arises from the need for careful management of the obese patient who is a candidate for liver transplantation, a complex and fragile patient who needs a multidisciplinary clinical and therapeutic framework. Our still small number of cases does not allow us to suggest a surgical model to follow, much less through the study of international literature it is clear which is the optimal management for this type of patient.

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PRELIMINARY RESULTS OF A PROSPECTIVE NON-RANDOMIZED COMPARATIVE STUDY COMPARING SINGLE-PORT APPROACH TO CONVENTIONAL LAPAROSCOPY FOR SLEEVE GASTRECTOMY (ONE SLEEVE: ISRCTN49101970)

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Background

Our team has demonstrated the feasibility and safety of performing sleeve gastrectomy using a single-port approach (SPSG) routinely. The advantage of this approach compared to the conventional laparoscopy remains to be proven.

Objectives

We present the preliminary results of a prospective, non-randomized, monocentric study comparing the outcomes of SPSG to those of conventional laparoscopic sleeve gastrectomy (CLSG) as a surgical treatment for people with obesity. (ONE SLEEVE, ISRCTN49101970).

Methods

In this non-randomized study, patients are freely referred to one of the two surgical teams that exclusively adopt and practice one of the two surgical approaches (SPSG or CLSG) as part of routine practice. The primary study outcome is a multimodal score evaluated at 1 month, taking into account the aesthetic appearance of the scars, the parietal pain in addition to the daytime and nighttime quality of life. The secondary outcome measures are: perioperative and early postoperative results (operative duration, additional trocars, morbidity), weight loss at 1 year, improvement of comorbidities, and the rate of incisional hernias (clinical and/or radiological).

Results

From March 2022 to March 2023, 88 patients with severe obesity according to the french High Authority of Health will have been included in each group (SPSG and CLSG). We will present the preliminary results of the study: primary endpoint and early secondary endpoints.

Conclusions

This study will specify the short-term benefits (aesthetic, pain, daytime and nighttime quality of life) of single-incision sleeve gastrectomy compared to conventional laparoscopy.

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PREOPERATIVE ENDOSCOPY AND FORMAL BARIATRIC SURGERY FOR MANAGEMENT OF GASTRIC GIST IN OBESE PATIENTS

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Background

Gastric GIST is a rare tumor (0.0006%) with many studies noting an increased incidence in obese patients (up to 0.8%). Surgical management typically involves excision with many options available; in the obese community, several studies advocate for resection via formal bariatric surgery.

Objectives

Our study aims to evaluate the advantage of preoperative endoscopic evaluation in bariatric patients in order to identify possible tumors prior to surgery. In addition, our study will incorporate formal bariatric-metabolic surgery as curative resection for obese patients in whom GIST is incidentally discovered.

Methods

After obtaining consent, we retrospectively evaluated patients in whom gastric GIST was assessed endoscopically and opted for a formal bariatric surgery approach, making note of outcomes and postoperative courses. A literature review was then conducted to determine incidence of GIST in the obese population and observe the outcomes described after resection by formal bariatric surgery.

Results

We present a case series of 3 patients with gastric GIST each treated with formal bariatric surgery for tumor resection. Of those, 66.6% (N=2) were planned for gastric sleeve for obesity and were noted to have incidental gastric GIST on preoperative endoscopy. The remaining 33.3% (N=1) was an obese patient found to have gastric GIST on endoscopy performed for anemia, who was subsequently treated with a sleeve gastrectomy. The largest tumor size was 30x50 mm. Each surgical resection had negative margins and no significant complications postoperatively. Review of the literature noted similar favorable outcomes in larger series treating gastric GIST with bariatric procedures as well as strong advocacy for preoperative upper endoscopy due to increased tumor incidence in obese patients.

Conclusions

Preoperative endoscopy is a useful adjunct to identify tumors in obese patients and assist with operative planning. Resection via formal bariatric-metabolic surgery for obese patients with incidentally discovered GIST may be beneficial to obtain negative margins as well as treat obesity and related complications. Further prospective studies may be required to demonstrate true clinical utility.

P-299

PRE-OPERATIVE PSYCHOLOGY ASSESSMENT AND BARIATRIC SURGERY: WHAT IMPACT DOES IT HAVE ON POST-OPERATIVE WEIGHT LOSS?

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Introduction

The bariatric population have an increased incidence of mental health problems. Psychological assessment (PA) can form part of the bariatric pathway, however, it is a limited resource requiring patients to be screened prior to referral. There is little data on what effect it has on weight loss. Our aim was to evaluate what effect PA has on weight loss through the bariatric pathway.

Methodology

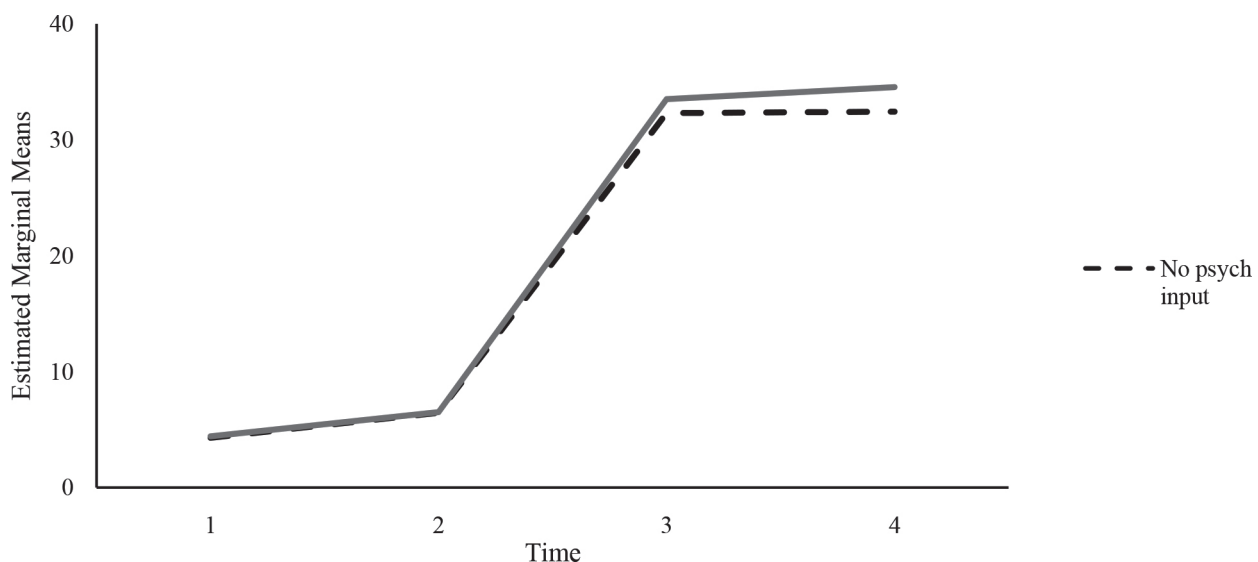
Patients who enrolled in the tier three weight loss programme during 2017 were reviewed. Those who did not proceed to bariatric surgery were excluded. Two sub-groups were created based on whether PA was performed. Weights were measured at five specified time points and percentage total bodyweight loss (PTBWL) was calculated. Chi-square tests were used to determine differences between groups for categorical variables and independent sample t-test for numerical variables. Repeated-measures ANOVA were used to determine differences between groups across time.

Results

299 patients met the inclusion criteria with 49.5% patients undergoing PA. No significant difference in PTBWL was found between the two groups over time ($p=0.207$). No correlation between time in psychology and weight loss was identified. Patients who underwent PA had higher initial BMIs (47.55 kg/m^2 vs 44.96 kg/m^2 , $p<0.01$) and increased incidence of mental health diagnoses (77.0% vs 35.1% , $p<0.01$). Time between tier 3 and tier 4 MDT was increased in the PA group (281.8 vs 193 days, $p<0.01$).

Summary

Patients followed the same weight loss trajectory irrespective of whether they required PA or not. An increase in time from tier 3 MDT to operation was evidenced.



% Total Body Weight Loss Across Time by Group: time 1 = consultant review; time 2 = day of surgery; time 3 = 1 year post-op; time 4 = 2 years post-op.

P-300

PREOPERATIVE WEIGHT LOSS IS RELATED TO HIGHER TOTAL WEIGHT LOSS, BUT NOT TO POSTOPERATIVE WEIGHT LOSS THREE YEARS AFTER BARIATRIC-METABOLIC SURGERY

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Introduction

Although mandatory weight loss (and rejection of people with weight gain) prior to bariatric-metabolic surgery (BMS) has been a common practice, there is limited high-quality evidence to support mandatory preoperative weight loss.

Objective

In this study we will evaluate whether weight loss prior to primary BMS is related to higher postoperative weight loss.

Methods

A retrospective analysis of prospectively collected data was performed. Preoperative weight loss (weight loss from start of program to day of surgery), postoperative weight loss (weight loss from day of surgery to follow-up) and total weight loss (weight loss from start of program to follow-up) were calculated. A linear mixed model compared post-operative weight loss between a group with preoperative weight gain of >1kg (group V) and patients with preoperative weight loss of >5kg (group I), 3-5 kg (group II), 1-3 kg (group III) and a stable weight (group IV).

Results

A total of 1,928 patients were included. Mean age was 44 years, 78.6% were female, and BMI at the start of the pre-operative program was 43.7 kg/m². *Group V* included 299 patients, *group I* 296, *group II* 263 patients, *group III* 447 patients and *group IV* 623. Linear mixed models showed significantly lower postoperative weight loss in all groups compared to group V at 12, 24 and 36 months follow-up (figure 1). Up to three years follow-up, highest totalTWL was observed in group I.

Conclusion

Preoperative weight gain was related to higher postoperative weight loss, however patients with higher preoperative weight loss had higher total weight loss. Thus, preoperative weight loss should be encouraged.

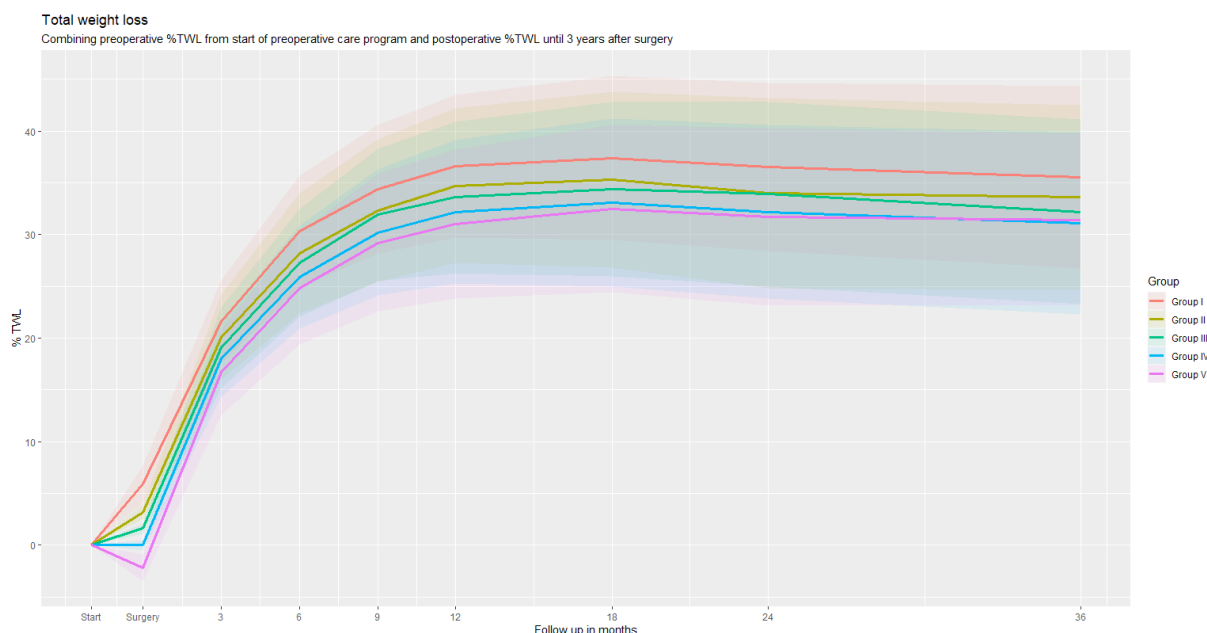


Figure 1. Preoperative, post-operative and total weight loss for each of the study groups.

P-301

PREVALENCE OF CHOLELITHIASIS IN PATIENTS WHO HAVE UNDERGONE BARIATRIC-METABOLIC SURGERY, BASED ON THE TYPE OF SURGICAL INTERVENTION

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Background

Due to its negative impact on morbidity and mortality, obesity in Mexico is considered to be a significant burden for the health sector and those who suffer from it. With the passage of time and the accumulation of evidence in favor of bariatric-metabolic surgery, it has become the treatment of choice for appropriately selected patients with clinically severe obesity (BMI 40 or 35 with comorbidities). Cholelithiasis has been associated with bariatric-metabolic surgery, especially malabsorptive procedures such as Roux-en-Y gastric bypass.

Objective

Determine the prevalence of cholelithiasis development in patients undergoing bariatric-metabolic surgery between 2016 and 2020 based on the type of surgical intervention.

Material and Methods

Analytical cross-sectional study evaluating the prevalence of post-surgical cholelithiasis among the various bariatric surgical procedures. Patients between the ages of 18 and 60 who underwent bariatric surgery between 2016 and 2020 and had an ultrasound of the liver and bile ducts after surgery were included. Patients with a prior history of cholecystectomy were excluded from the study.

Results

132 patients were studied. 38 (28.8%) were men and 94 (71.2%) women. The average age was 42.9 years old. The coexistence of comorbidities was observed in 96 patients (72.7%). The pre-operative weight was 121 kg (QR 107-141), which corresponded to a BMI of 45.7 kg/m² (QR 40-50.1). The postoperative BMI was 33.8 kg/m² (QR 29.2-39.2) and weight loss was 52% on average (QR 38.4-74). 33 (25%) sleeves, 87 (65.9%) RYGB, and eight (6.1%) BAGUA were performed. There were no differences between surgical procedures in terms of excess weight loss. We found a prevalence of 30.3% for post-surgical cholelithiasis.

Conclusion

There was an association between bariatric-metabolic surgery and an increase in the prevalence of cholelithiasis, but no clinical or surgical characteristics were identified as being associated with this complication

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PREVALENCE OF DEPRESSION IN PATIENTS UNDERGOING METABOLIC BARIATRIC SURGERY

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Background

The association between people with obesity and depression has been repeatedly established. However, little is known about the impact that a diagnosis of depression before bariatric surgery may have on weight loss and associated comorbidities.

Objective

To analyze the prevalence of depression preoperatively and after 12 months in patients undergoing bariatric surgery (BS).

Methods

This was conceived as retrospective, descriptive, and cross-sectional study, with a quantitative approach. The database was consulted in the period of 2018-2019 and 2020-2021. In total, 100 patients were included in each evaluated period and the following data assessed was collected: body weight, body mass index, age, gender and self-report of depression before and after bariatric surgery. For all data, the results were considered significant ($p < 0.05$). Quantitative data analyses were described by mean and standard deviation and the longitudinal variability of quantitative medians were evaluated using generalized estimating equations.

Results

The prevalence of self-reported depressive symptoms in the preoperative period was 43%, being higher in 2018-2019 (39%) than in 2020-2021 (4%). Significant associations were found between depression and marital status (divorced/separated) ($p = 0.001$), hypertension ($p = 0.001$), self-reported psychiatric history ($p = 0.001$) and sex 48% of women were more likely to have depressive symptoms. However, marital status (married) proved to be a protective factor for symptoms of depression in patients after bariatric surgery in the 12 months analyzed.

Conclusion

These findings highlight the importance of psychological care for patients with a self-reported history of depression, who underwent bariatric surgery, in preventing the development of mental disorders and in maintaining the improvement of excess weight and associated comorbidities.

Keywords: Gastric bypass; Metabolic bariatric surgery; People with obesity; Depression.

P-303

PREVALENCE OF HIATAL HERNIA IN PATIENTS UNDERGOING BARIATRIC SURGERY. EXPERIENCE OF THE TIJUANA OBESITY RESEARCH GROUP, MEXICO

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Background

Bariatric surgeries are performed with high frequency in specialized hospitals in Tijuana, which positively change the lives of patients with obesity due to the weight reduction achieved, the health benefits and the remission of comorbidities; hiatal hernia (HH) are frequently found in these procedures, although their incidence is variable can range from 17% to 26.8%, depending on the literature.

Methods

A cross-sectional study was performed, records of bariatric surgery patients in the period March - August 2022 were reviewed. Mean and standard deviation were calculated for quantitative variables, and Chi square test or Fisher's exact test for qualitative variables. All p values <0.05 were considered significant.

Results

A total of 5013 patients aged 38.7 ± 10.2 years were included (86% female and 14% male). Mean BMI was 54.2 ± 2.9 Kg/m² (15.6% obesity I, 23.3% obesity II, 39.3% obesity III, 15.3% obesity IV, and 6.5% obesity V). Nine percent of patients were diagnosed with Diabetes Mellitus, 23.3% with arterial hypertension. Heartburn was referred in 11.5% of patients. The most frequently performed procedure was the gastric sleeve in 86.5% of cases, followed by Gastric bypass (3.2%), and mini gastric bypass (2.0%). Hiatal hernia was detected in 3.3% through preoperatively esophagogastroduodenoscopy. During the surgical procedure HH was detected in 17.2% in obesity I patients, 20.1% in obesity II, 18.9% in obesity III, 14.1% in Obesity IV, and 17.8% in Obesity V (p= 0.013) with a global prevalence of 18.1%. All hernias found in the surgery were repaired. There was no statistically significant difference between gender and HH prevalence (p= 0.317).

Conclusions

In this cohort of patients the prevalence of hiatal hernia was 18.1%, a value close to the lower limit reported in the international literature. In otherwise, the highest prevalence was found in our patients with grade II obesity (20.1%) and establishes a significant difference with the group of obesity IV patients who presented a prevalence of 14.1%, which was the lowest of our group.

Keywords: Hiatal Hernia, Prevalence, Obesity, Surgical Procedures.

P-304

PREVENTION OF REFLUX ESOPHAGITIS IN SLEEVE GASTRECTOMY

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Background

Sleeve gastrectomy (SG) has become a popular bariatric surgery over the past few years as it has several advantages over more complex bariatric procedures. However, several published follow-up studies report an increased incidence of gastroesophageal reflux (GERD) after FH.

Objective

To improve the results of sleeve gastrectomy with a decrease in the number of GERD after the operation period.

Methods

We performed 948 sleeve gastrectomy in severely obese patients. Of these, 387 patients underwent sleeve gastrectomy without additional fixation of the residual part of the fundus of the stomach to the left crus of the diaphragm. In 561 patients, a sleeve gastrectomy was performed with interrupted sutures to fix the residual part of the fundus of the stomach to the left crus of the diaphragm in order to prevent GERD. In these patients, when performing a sleeve gastrectomy, a line of staple sutures was placed 1.5 cm from the angle of Hiss, and this part of the fundus of the stomach was sutured with one interrupted suture to the left crus of the diaphragm (Figure 1). To detect GERD and signs of reflux esophagitis before surgery and in the postoperative period after 3.6 and 12 months, gastrofibroscopy was performed with a biopsy from the lower third of the esophagus.

Results

The conducted studies showed that in patients of the control group, without additional suturing of the residual part of the fundus of the stomach to the left crus of the diaphragm. In the postoperative period after 12 months, GERD was detected in 11 (2.8%) cases, while in patients of the main group, when applying one interrupted suture with fixation of the residual part of the fundus of the stomach to the left crus of the diaphragm, GERD developed only in 3 (0, 5%) of patients.

Conclusion

Studies have shown the effectiveness of fixing the residual part of the fundus of the stomach to the left crus of the diaphragm for the prevention of GERD after sleeve gastrectomy.

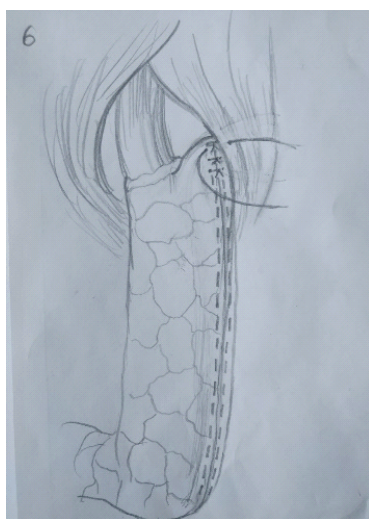


Figure 1. Sewing of the residual part of the stomach to the left leg of the diaphragm.

P-305

PROS AND CONS OF GABAPENTIN IN PAIN MANAGEMENT

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Background

Studies have found that gabapentin reduces surgical pain and postoperative opioid needs. Based on these reports, we incorporated gabapentin into our multimodal analgesia (MMA) regimen but discontinued its use following complaints of prolonged sedation, drowsiness, fatigue and adverse medication reactions. We now examine the effectiveness of our MMA regimen for peri- and postoperative pain management since gabapentin suspension.

Objective

To examine postoperative pain scores and opioid needs of bariatric patients treated with or without gabapentin (GAB).

Methods

The study was a retrospective analysis of 99 totally robotic Roux-en-Y gastric bypass (RYGB) surgeries performed with GAB (n=49) or without (NO-GAB) (n=50). Patients on GAB received 600 mg preoperatively, 300 mg TID on the hospital unit, and were prescribed 300 mg TID at discharge. Measurements included: 1) pain scores and opioid needs in the postoperative ambulatory care unit (PACU) and during the hospital stay, 2) time-to-reaction during recovery, 3) patient characteristics (co-morbidities, BMI, age, gender), 4) perioperative outcomes (surgery duration, complications, length of stay), and 5) 30-day readmissions/reoperations.

Results

Age, BMI and the total number and incidence of co-morbidities were similar between the GAB and NO-GAB patients; age (43.6 vs. 43.7 y, respectively), BMI (46.9 vs. 45.6), number of co-morbidities (2.88 vs. 2.74). Operative times were longer with GAB (129.4 vs. 112.0 min, $p=0.0008$) but there were no intraoperative complications and no significant differences between the GAB and NO-GAB groups for postoperative time-to-alertness (199.0 vs. 210.4 min). Average pain scores in PACU did not differ significantly between GAB and NO-GAB patients (1.7 ± 0.23 vs. 2.0 ± 0.32) but opioid needs with GAB were significantly ($p=0.0073$) lower (2.34 ± 0.43 vs. 4.09 ± 0.47 mEq). During the hospital stay, average pain scores were significantly ($p=0.0006$) lower with GAB vs. NO-GAB (3.34 ± 0.17 vs. 4.20 ± 0.17 , respectively), as were 24-hr opioid needs (4.64 ± 0.99 vs. 7.50 ± 1.0 mEq, $p<0.05$). Three GAB patients were readmitted for postoperative issues including dizziness and drowsiness.

Conclusion

Since the discontinuation of gabapentin, postoperative pain and opioid use following RYGB have increased but, due to its side-effects, will not be re-introduced into our program. The study findings do, however, suggest a need for re-evaluation of the current MMA regimen.

P-306

PROSPECTIVE STUDY OF THE PRIMARY OBESITY SURGERY ENDOLUMINAL (POSE) WITH DOUBLE G-LIX PROCEDURE FOR TREATMENT OF OBESITY. A SIX-MONTH FOLLOW-UP

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Background

The Primary Obesity Surgery Endoluminal (POSE) with) and double g-Lix procedure involves a novel pattern of full-thickness gastric body plications to shorten and narrow the stomach using the IOP platform (USGI Medical, San Clemente, CA) and durable suture anchor pairs g-Cath and two g-Lix simultaneously to achieve larger folds, reducing the number of sutures per procedure.

Objectives

Our prospective trial examined the safety and durability of POSE with double G-Lix in adults with obesity grade I and II.

Methods

Adults suffering obesity underwent POSE with double G-Lix in our center. Primary outcomes were safety, durability of plications at 3, 6, 12 and 24 month follow-up and the cost effectiveness of the technique. Safety will be determined by the incidence of any serious adverse events reported either by the subject or observed by the investigator, relating to the procedure either peri-procedurally or in the follow-up period. All adverse events will be documented. Secondary outcomes were total body weight loss (%TBWL), proportion of patients achieving > 5% TBWL at 12 months and reduction of the cost of the procedure compared to standard POSE 2.0 technique, based on the average number of plications placed.

Results

13 patients (7F, age 45 ± 9.9 years) underwent double g-Lix POSE. Baseline BMI was 37.2 ± 3.1 kg/m². Technical success was 100%. An average of 10 ± 2 suture anchor pairs were placed in each case. At six months, patients (n=7) achieved a 14.1 ± 3.9 % total weight loss (%TWL), with 100% achieving >5% and 86% achieving more than 10 % TWL. Blood test results, state that insulin resistance and liver enzymes improved. The adverse event rate was 1 out of 14. The reduction of 8 plications compared to the average POSE 2.0 procedure brings a significant reduction of the cost of the procedure.

Conclusions

Double G-Lix POSE procedure happens to be effective for treating obesity and its related comorbidities. It is a safe, durable and cost-effective procedure however, it is necessary to complete a long-term follow-up and carry out studies with larger samples to proclaim those benefits.

P-307

PROTOCOL FOR THE UNITED KINGDOM'S NATIONAL EMERGENCY BARIATRIC SURGERY AUDIT (NEBSA)

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Background

Current data on complications and emergency admissions following bariatric surgery are incomplete, partly due to patients attending non-index hospitals. Furthermore, the impact of medical tourism and self-funded bariatric surgery on emergency services has not been fully explored. This study aims to investigate current trends, outcomes, and service delivery in managing bariatric surgical emergency admissions in the UK by establishing a National Emergency Bariatric Surgery Audit (NEBSA) registry.

Objectives

The main aims of the registry will be to:

- Determine the length of stay, mortality, and complication rates in bariatric surgical emergency admissions.
- Assess variations in practice and resource utilization.
- Compare patient characteristics between state-funded and self-pay bariatric surgery.
- Evaluate the severity of complications and rates of intensive care admissions and mortality following bariatric surgical emergencies.
- Determine rates of outpatient follow-up and further planned procedures.

Methods

A prospective, multi-centre, cross-sectional study will be conducted. Patients meeting broad inclusion criteria will be identified and their outcomes prospectively recorded. Data will be collected online via a bespoke tool, and collaborators will be invited from recognized UK bariatric centres. A range of demographic, clinical, and outcome variables will be captured over a 6-month period. Independent assessors will validate a minimum of 20% of patient records.

Results

Primary outcomes will include length of stay, mortality, and complication rates. Secondary outcomes will explore variations in practice, patient characteristics, severity of complications, intensive care admissions, rates of follow-up and further procedures as well as the financial cost to the health service. Statistical analysis will involve the Shapiro-Wilk test, unpaired t-tests, Mann-Whitney U tests, chi-square tests, Fisher exact tests, and multivariable logistic and temporal regression depending on the outcome under investigation.

Conclusions

NEBSA will provide insights into current practice and patient outcomes in bariatric surgical emergency admissions in the UK. It will uncover common patient characteristics and potential relationships between patient engagement, socioeconomic status, and choice of surgery funding. Findings may guide future qualitative studies and inform policy making. Additionally, results could identify knowledge gaps and training needs in the management of bariatric surgical emergencies.

P-308

PSYCHOLOGICAL AND SOCIAL FACTORS AS PREDICTORS OF PROCEDURE CHOICE BETWEEN ENDOSCOPIC AND LAPAROSCOPIC SLEEVE: A COHORT STUDY IN MATCHED CASES

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Background

Globally, availability of endoscopic weight loss procedures such as the endoscopic sleeve gastropasty (ESG), are increasing. Patient factors which influence choice of surgical versus endoscopic bariatric-metabolic procedure have not been explored.

Objective

To determine if pre-procedural weight-related psychological and social factors influence selection of ESG versus laparoscopic sleeve gastrectomy (LSG) in matched adults.

Methods

A prospective cohort study was conducted at a single study site in Australia offering both ESG and LSG procedures but by different proceduralists. Patients who elected an ESG were recruited and LSG patients were selected to match for age, sex, and BMI. Weight-related psychological and social factors at baseline were measured by the Impact of Weight of Quality of Life-Lite instrument (0-100%; higher score indicated higher quality of life). Baseline body composition was measured via dual-energy x-ray absorptiometry. Means and mean ranks compared outcomes between cohorts. Adjusted binary regression was used to determine predictors procedure choice.

Results

25 ESG and 25 LSG patients were recruited (female: 82%, mean age 41.7 [SD:9.4] years). There were no differences in comorbidities, body fat percent, nor lean mass percent ($p > 0.05$). Both cohorts experienced severe weight-related impacts on their physical function (ESG: 57.5[SD:17.7]%; LSG: 53.3[SD:18.1]%), sexual life (ESG: 49.7[SD:28.3]%; LSG: 42.0[SD:20.5]%), public distress (ESG: 70.0[IQR:65.0-95.0]%; LSG: 67.2[SD:21.7]%), and work (ESG: 68.4[SD:19.5]%; LSG: 68.5[SD:16.3]%) ($p > 0.05$ for all). LSG had slightly lower total weight-related quality of life (49.5[SD:10.6]% versus 56.6[SD:12.7]%, $p = 0.045$) but a substantially lower weight-related self-esteem (10.7 (IQR:3.6-25.0)% versus 25 (IQR:17.9-39.3)%, $p = 0.02$), compared to ESG. For every percent increase in weight-related self-esteem, the odds for selecting ESG increased by 4.4% (OR: 1.044; 95%CI:1.004-1.085; $p = .03$). Age, sex, and BMI were moderators of procedure choice in the matched cohorts.

Conclusions

Australian adults who elected an endoscopic versus surgical sleeve may have different weight-related quality of life experiences independent of age, sex, and BMI. Reasons for these different experiences remain unexplored. Candidates with lower weight-related self-esteem may be more likely to select a surgical rather than endoscopic bariatric-metabolic procedure. Due to the low weight-related quality of life, psychological support is required for bariatric-metabolic procedure candidates regardless of procedure choice.

P-309

PSYCHOLOGICAL ASSESSMENT BEFORE BARIATRIC SURGERY: INTEGRATIVE REVIEW

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Background

Although there is an increase in the demand for bariatric surgery, as well as recognition of the importance of changing eating behavior and lifestyle for a better postoperative result, there are a small number of specific studies for the area of psychological assessment in bariatric surgeries. This seems to have an impact on the performance of the psychologist evaluator.

Objectives

To analyze, through an integrative review, the current scientific production to identify the main psychological aspects evaluated and which are the main instruments used in psychological evaluations before bariatric surgery.

Methods

A search was performed in the Pubmed electronic database, from 2017 to 2023, with the descriptors: Psychological Assessment, Bariatric Surgery, and Preoperative. Alternative descriptors were added and separated by Boolean operators. The articles included should address the pre-bariatric surgery psychological assessment and its main aspects. After selection, two independent researchers analyzed the articles found and included those that met the inclusion criteria for further analysis.

Results

73 articles were analyzed and, of these, 12 met the inclusion criteria. From these studies, it was possible to identify that the psychological aspects considered relevant to be evaluated cover areas of eating behavior, current and previous psychiatric disorders, personality, desire for socialization, coping style, support network, cognitive function, and knowledge associated with surgeries and impacts in the postoperative period. The most used instruments are the semi-structured clinical interview, psychometric tests, self-report scales and questionnaires.

Conclusion

Through the studies found, it was possible to notice the lack of standardization and consensus regarding the criteria and instruments to be used in preoperative psychological assessments. The assessment protocol varied regardless of the nationality of origin of the articles.

P-310

PSYCHOLOGICAL FLEXIBILITY AS A PERSONAL ASSET IN WOMEN WITH SYMPTOMS OF ANXIETY AND WEIGHT GAIN AFTER BARIATRIC SURGERY

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Introduction

The presence of anxiety symptoms in people who have undergone bariatric surgery is a common problem; Actually, these symptoms are part of the profile of the pre-surgical patient with a diagnosis of obesity and it is one of the factors that occurs most frequently, related to the presence of weight gain when presenting overeating as a psychological resource to calm anxiety symptoms. Therefore, it is of paramount importance to make therapeutic proposals for psychological intervention.

Aim

To evaluate the results of a psychological intervention related to psychological flexibility through acceptance and commitment therapy in women with anxiety symptoms who have undergone bariatric surgery and present weight gain.

Methodology

We worked with a sample of 132 women users of the service in the Bariatric and Metabolic Surgery Unit, administering an evaluation through specialized psychological tests to later work for 4 weeks in a psychological intervention program.

Results

It was found that 58% of the sample presented symptoms that were classified in the areas of anxiety, stress and somatization, where 30% of the people required medication. In the evaluation, the factor of avoidance of unpleasant experiences was identified, which was mainly related to the presence of anxiety symptoms.

Conclusions

When working in a 4-week psychological intervention program, it was found that the experience avoidance factor increased the variables related to the presence of anxiety, so psychological work on strengthening psychological flexibility as a personal asset through anxiety therapy Acceptance and commitment was considered relevant in terms of the awareness of the participants about learning to reduce the avoidance of unpleasant experiences and increase psychological flexibility as a way of positive coping, acceptance of the problem and commitment to take charge and advance in the process. bariatric process.

P-311

QUALITY OF LIFE OUTCOMES AFTER 3 YEARS OF BARIATRIC SURGERY: COMPARISON OF ROUX EN Y GASTRIC BYPASS AND ONE ANASTOMOSIS GASTRIC BYPASS

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Background

Laparoscopic One Anastomosis Gastric Bypass and Laparoscopic Roux-en-Y gastric Bypass are two of the most common bariatric techniques. We compared quality of life in both procedures, assessing pre-operative and long term post-operative differences in quality of life, physical activity level and psychosocial functioning in patients undergoing bariatric surgery.

Methods

A prospective cohort study including obese patients undergoing either Laparoscopic One Anastomosis Gastric Bypass or Laparoscopic Roux-en-Y gastric Bypass. The Moorehead-Ardelt Quality of Life Questionnaire II and Gastrointestinal Quality of Life Index (GIQLI) questionnaires were administered at 3 months preoperatively and 3 years after surgery, while the third, the Bariatric Analysis and Reporting Outcome System (BAROS), was administered only postoperatively.

Results

A total of 41 patients were included in the study. Statistically significant differences were found between the Moorehead-Ardelt Quality of Life Questionnaire II and QIGLI scores taken at both time points, across the entire cohort ($p=0.001$ and $p=0.001$, respectively); and between the results taken at 3 years postoperatively in the BAROS test ($p=0.001$) for the entire cohort. There were no significant differences between Laparoscopic One Anastomosis Gastric Bypass and Laparoscopic Roux-en-Y gastric Bypass groups in the questionnaire scores (Moorehead-Ardelt Quality of Life Questionnaire II: $p=0.526$, QIGLI: $p=0.990$ and BAROS: $p=0.753$).

Conclusions

Bariatric surgery improves quality of life in operated patients, without significant differences between Laparoscopic One Anastomosis Gastric Bypass and Laparoscopic Roux-en-Y gastric Bypass techniques. Patients undergoing bariatric surgery develop higher physical activity levels, and long-term improvements in the psychosocial domain are observed over time.

P-312

RAPIDLY RECOVERED STAPLE LINE LEAKAGE AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY: A CASE REPORT

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Introduction

Bariatric surgery is an effective treatment for morbid obesity. Among the operation techniques, sleeve gastrectomy is regarded to be one of the most effective way with relatively low risks of complication. Especially leakage of staple line is rare complication after laparoscopic sleeve gastrectomy, which may lead to major morbidity.

Case report

Our patient was 30-years-old male with hypertension, dyslipidemia, umbilical hernia and morbid obesity. Previously the patient underwent laparoscopic sleeve gastrectomy in June, 2019; at the time of that operation, he had a BMI of 36kg/m². After the operation, the patient discharged without event and followed in at outpatient setting. 2-months after operation, August 2019, he visited outpatient office for abdomen pain. For evaluation, upper-gastrointestinal series with gastrograffin and Abdomen & Pelvis CT with enhance was done immediately. Through image studies, post-operative leakage at the distal portion of staple line and large amount of fluid collection near resection margin was found. The patient admitted and percutaneous drainage (PCD) for fluid collection was done immediately. Additionally, a hole at lower body and greater curvature of stomach was identified through upper-gastrointestinal endoscopy, and clipping and approximation of clips by snaring was done. After PCD insertion and endoscopic clipping, abdomen pain and fever was resolved in a few days surprisingly. After 1 week, the amount of drainage decreased. The PCD was removed on 8th day after insertion and the patient was discharge without any other complication and symptoms.

Conclusion

After laparoscopic sleeve gastrectomy, it is possible to face leakage at the staple line. In such situations, it is important to quickly identify the problem through proper image studies, such as upper-gastrointestinal series with gastrograffin, and to decide appropriate intervention immediately, such as percutaneous drainage and endoscopic clipping. Immediate and proper management of leakage may lead to rapid recovery.

P-313
RE-ADMISSION AFTER BARIATRIC SURGERY; DOES THE PROCEDURE MATTER?

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Introduction

Bariatric surgery is the mainstay of management of morbid obesity with increasing numbers of procedures performed worldwide. Despite all prophylactic measures that have been recommended, postoperative complications still occur with significant numbers. Postoperative complications differ according to the performed procedure. Moreover, they represent a heterogeneous group of diseases with different timing, pathophysiology, severity and management that ranging from simple medications or procedures to major revisional surgery. Many patients require hospital readmission for management of these complications. This increasing numbers of readmission prompted us to analyze the causes of readmission.

Objectives

To report our experience, as a tertiary university institute in managing various complications after different bariatric procedures that necessitated hospital readmission.

Methods

This retrospective study included all patients who have been admitted in a university tertiary hospital in Saudi Arabia with any post-bariatric surgery complication for the last five years.

Results

A total of 228 admitted patients were labelled as post-bariatric complications. Most of them was diagnosed with more than one clinical entity. These patients underwent different bariatric procedures either performed in our institution or referred to us from other hospitals. Demographic data revealed that both genders were equally involved, the age ranged from 15-68 years. Most of bariatric procedures were reported. The length of hospital stay ranged from 1 – 84 days. Postoperative leakage was found in 23 patients after sleeve gastrectomy.

Conclusion

Better recognition and diagnosis of postoperative complications is mandatory. Analysis of the common causes could prompt a clinical pathway and preventing programs.

P-314

READMISSION AND REOPERATION RATES AFTER LAPAROSCOPIC BARIATRIC SURGERY IN AN ITALIAN CENTER OF EXCELLENCE

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Background

The present study aimed to analyze short-term outcomes focusing on readmissions after laparoscopic bariatric/metabolic surgery in an Italian IFSO-European Chapter (EC) academic bariatric center.

Methods

This is a retrospective study based on the analysis of a prospectively maintained institutional database. Patients aged between 18 and 65 years who underwent primary and/or revisional laparoscopic bariatric surgery between 2012 and 2021 were included. The primary endpoint was to analyze the readmission rate at 30 days. The secondary endpoint involved assessing the causes of readmission within 30 days of discharge, the rate and types of reoperations and/or additional procedures related to the first surgery, and the outcomes of readmitted patients.

Results

A total of 2297 patients were included in the study. Among them, 2143 underwent primary surgery and 154 patients underwent revisional bariatric surgery. Eighty-two percent of the Enhanced Recovery after Surgery (ERAS) protocol items were applied. Within 30 days after discharge, 48 patients (2.09%) were readmitted. The overall readmission rate following primary surgery was 2.15%, and 1.30% after revisional surgery. Ten patients had complications graded IIIb or more and needed additional procedures. Two readmitted patients died after reoperation.

Conclusion

Only 2.09% of patients undergoing laparoscopic bariatric/metabolic surgery adopting the ERAS protocol required re-admission. Of these, 20.8% required additional procedures. The mortality rate was 4.17% among readmitted patients. Standardization of surgical techniques and perioperative protocols in a bariatric center of excellence resulted in a low rate of readmission even in revisional surgery.

P-315

REAL-WORLD COMMUNITY LEVEL DATA CONFIRMS THAT BARIATRIC-METABOLIC SURGERY LEADS TO REDUCED NEED FOR DIABETIC MEDICATION WITHIN ONE YEAR OF SURGERY

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Background

Type 2 diabetes mellitus (T2DM) is a disease with known significant health risks and long-term healthcare costs. Whilst there is high level evidence from Randomised Controlled Trials (RCT) that Bariatric-Metabolic Surgery (BMS) can reduce or eliminate the need for diabetic medication within one year, there is currently limited information on how these positive results translate in the real-world community setting.

Objectives

To use a population level dataset to investigate how BMS impacts the management of diabetes at one-year at one year after surgery.

Methods

Baseline demographic, diabetes treatment, procedural data and surgical outcomes for participants who had a primary BMS procedure were provided to the national registry between 28 February 2012 and 31 December 2021 by their surgeon or health service. Data on diabetes treatment, weight and need for operation was collected annually from surgeon, health service or participant. Regular audits of data were undertaken to confirm data completeness and accuracy.

Results

Information from 102,297 people with obesity who underwent a primary BMS procedure were included in the analysis. 13,904 participants were identified as having diabetes before surgery (baseline). Type of diabetes treatment was collected for 12,915 participants, with 2,707 participants (21%) on insulin. One-year diabetes treatment data was collected for 6,432 of the participants with baseline diabetes treatment data. 4,938 (69%) participants requiring insulin or non-insulin therapy at time of surgery no longer required any diabetes medication within one year post-operatively. 1,031 of 1,464 (70%) participants on insulin at baseline no longer required insulin at one year, with 50% off all medication. 598 of 862 (69%) participants who required insulin and underwent a laparoscopic sleeve gastrectomy no longer required insulin within one year. This compared to 136 of 190 (72%) of those who had a one anastomosis gastric bypass and 249 of 315 (79%) who underwent a Roux-en-Y gastric bypass.

Conclusion

Real-world community level registry data confirms the positive impact of bariatric-metabolic surgery on T2DM previously reported in RCT.

P-316

RECOMENDATIONS ON SINGLE ANASTOMOSIS DUODENO-ILEAL BYPASS WITH SLEEVE GASTRECTOMY (SADIS) IN PATIENTS WITH BMI >60 KG/M²

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Background

The single anastomosis duodenal-ileal bypass with sleeve gastrectomy (SADIS) has demonstrated its long-term effectiveness in weight loss. Patients with high BMI can be challenging for surgeons.

Objective

Based on our experience, we present some modifications to the classical technique that might help colleagues confront these challenges.

Methods

Data of patients who underwent SADIS with BMI greater than 60 kg/m² from march to December 2022 was included; demographics, perioperative, complications, EWL%, and comorbidity remission were analyzed. Anesthetic modifications: Induction with fentanyl (250mcg) and maintenance with remifentanyl (2ng/ml), pre-oxygenation 10 min, intubation with a video laryngoscope, mechanical ventilation with PEEP >6MMHG, and Fio₂ 70 %, maintenance with sevoflurane, intermittent pneumatic compression stockings, and PACU (Post-anesthesia care unit) anticoagulation (enoxaparin 60-80mg). Surgical modifications: American position, trocars are placed with the Z-entry technique; this allows us to have a better approach to the upper abdominal quadrants, opposite to the classical trocar insertion where mobility of laparoscopic equipment is more limited; therefore, reaching the mentioned quadrants can be challenging. Gastric fundus, duodenum, and diaphragmatic pillar dissection, as well as stapling of the duodenum-ileoanastomosis, are performed by the assistant surgeon from the left side of the patient.

Results

16 patients were included, follow-up rate at six months was 100%. Female sex comprised 56% (9) of cases; the mean weight was 198.9 kg, and the mean BMI was 70.2 kg/m². 14 SADIS were performed as primary surgery. The mean surgical time was 79 minutes. There was only one postoperative complication, a patient who required supplemental oxygen therapy due to oxygen desaturation. Mean EWL% was 32% at three months and 61% at six months. Comorbidity resolution at six months was observed in 5 out of 6 patients (83%) with hypertension; the only patient with diabetes reported a partial resolution of his condition.

Conclusion

SADIS has promising weight loss outcomes as a primary or secondary procedure; it also offers a maintained EWL% and a low postoperative complications rate. Our modifications have allowed us to work more ergonomically in patients with BMI >60 kg/m² and improve surgical time.

Keywords: Bariatric Surgery, SADIS, Severe Obesity, Weight Regain.

P-317

RECURRENT PERFORATION AND BLEEDING OF A MARGINAL ULCER POST ONE ANASTOMOTIC GASTRIC BYPASS: A CASE REPORT

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Background

The one anastomosis gastric bypass (OAGB) is a commonly performed bariatric procedure. While OAGB is postulated to have a protective effect for marginal ulcers and bleeding due to the presence of bile at the gastrojejunal (GJ) anastomosis, GJ ulceration post OAGB still has an incidence rate of 0.6-8% and perforation is a rare but life-threatening complication.

Objectives

Case presentation of a patient who underwent OAGB 10 years ago, previously had 2 episodes of bleeding marginal ulcer, followed by recurrent perforation which was treated firstly with an omental patch repair and subsequently by revision to Roux-En-Y gastric bypass (RYGB).

Methods

Case report with information from medical records. Demographic, presentation, laboratory, images and data with regards to surgical technique, outcomes and management was collected.

Results

A 58 year old gentleman with a history of diabetes, hypertension, hyperlipidemia and ischaemic heart disease underwent OAGB in 2013 for metabolic syndrome with class 2 obesity. He had two episodes of bleeding from GJ marginal ulcer in 2016 and 2017 requiring oesophagogastroduodenoscopy (OGD) and hemostasis. After each bleeding episode, he had repeat endoscopy which showed resolution of the marginal ulcer. 4 years later, he developed a GJ ulcer perforation requiring exploratory laparotomy and omental patch repair in 2021. Two years later in 2023, he had an episode of acute onset severe abdominal pain. CT scan revealed pneumoperitoneum with a defect in the anterior wall of the GJ anastomosis. Intraoperatively, he was found to have biliopurulent 4 quadrant contamination with a 1.5cm anterior defect at the GJ anastomosis, BP limb of 150cm and common channel of 280cm and reversal of GJ anastomosis lie with internal herniation. The GJ anastomosis was taken down and RYGB was performed. He recovered well post operatively. OGD performed 3 months post-operatively showed no marginal ulcer and a healthy RYGB GJ anastomosis.

Conclusion

Proton pump inhibitors and close endoscopic surveillance should be considered for patients who have marginal ulcers post OAGB. Patients with recurrent ulcers should be counseled for revision surgery. Surgical management options for perforated marginal ulcers include omental patch repair or revision to RYGB.

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RE-DISTALIZATION OF ROUX EN Y GASTRIC BYPASS (RYGB) AFTER WEIGHT GAIN – LONG TERM FOLLOW UP: A CASE REPORT

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Background

Distal Roux en Y gastric bypass (Brolin's or Type II distalization) fails to achieve long-term weight loss maintenance. We report our experience to improve performance and further diminish the absorption capacity by Re-distalization at the expense of the Roux alimentary limb.

Methods

We present a case of a 50-year-old female patient who regained weight following distalization of primary roux en Y gastric bypass (RYGB). Her primary gastric bypass was performed in 2008 (135 kg, BMI 47.3) with a good weight loss of 50kg (85kg, BMI 29.7). In 2013 a Brolin-type distalization was performed because of weight regain (105kg, BMI 36,7). The following limb lengths were measured: Alimentary limb 7m, biliopancreatic (BP) limb 50cm, and common limb 1m 20. After this procedure, she lost only 5kg. A few years later she regained weight again (110kg, BMI 37,7) despite a daily calorie intake of only 1187 kcal and a barium swallow that shows a small gastric pouch. The redistalization procedure was opted to configure the previous Brolin technique. We shorten the AL length by excluding (not resectioning) 4 m 80 cm from the small bowel; thus, a new AL length is 2 m, and a new connection was made between AL and excluded intestine 20 cm away from the common limb.

Results

No complications occurred and the patient had a satisfying weight loss one year postoperatively (100kg, BMI 34,8). At 2.5 years after the redistalization for the follow-up. Her weight was 91 kg, and her BMI was 31.6. The defecation frequency decreased to two times daily with some mild complaints of flatulence. At 7-year follow-up, no bowel habit complications, patient performed daily activity smoothly, her weight was stable 90 kg and performed daily sports.

Conclusion

Re-distalization of RYGB at the expense of roux alimentary limb (Type I distalization) results in substantial improvement in weight loss at long-term follow-up after previous distalization (Type II distalization), However, post-revision patient counseling and close monitoring are essential. It is worth mentioning that we did not find any case of severe malnutrition or deficiencies after conversion in our patient.

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REDO SURGERY AFTER ONE ANASTOMOSIS GASTRIC BYPASS: INDICATIONS AND OPTIONS

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Background

Bariatric surgery is very common nowadays with minigastric bypass (MGB) among the most common procedures in the Middle East. In many studies, MGB has proven to be effective in adequate weight reduction and improving obesity-related comorbidities.

Objective

To study the indications, possibility and outcomes for revisions and redo of MGB.

Patients and methods

We reviewed the files of patients who underwent revision or redo surgery following a previous MGB in a bariatric center in a university hospital. Data collected included general demographics of the patients, type of the procedure, indications and outcomes of the redo surgery.

Results

The most common indications for redo surgery were weight regain, reflux symptoms, nutritional deficiencies and dumping syndrome.

Conclusion and Recommendations

Considering the fact that MGB is effective for weight-reduction and metabolic control, and in the presence of feasibility and safety for revisions and redo of MGB for different indications, MGB is considered a good option for patients.

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REDO TRANSORAL OUTLET REDUCTION (RE-TORE): TECHNICAL FEASIBILITY AND MEDIUM-TERM OUTCOMES

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Aims

Weight regain and dumping syndrome (DS) are two relevant long-term adverse events after Roux-en-Y Gastric Bypass (RYGB) related to the dilation of the gastro-jejunal anastomosis (GJA). Transoral outlet reduction (TORe) is a minimally invasive endoscopic procedure that was introduced to treat these conditions when medical treatment fails. As every endoscopic procedure, TORe is repeatable per definition. In this case series, we evaluate the technical feasibility and short and medium-term outcomes of re-TORe in patients with weight regain and/or DS recurrence after primary TORe.

Methods

A retrospective analysis was done on a prospective database including patients that underwent TORe between January 2015 and October 2021; patients who received a re-TORe because of progressive loss of satiety and weight regain ($\geq 50\%$ of weight loss after primary TORe), or relapse of DS along with endoscopic evidence of GJA dilation recurrence (Figure 1) were included in the analysis. DS recurrence was defined as Sigstad's dumping score ≥ 7 . Sigstad's score, early and late Arts Dumping Score questionnaires, and percentage of total body weight loss (%TBWL) were assessed at baseline, at 6 and 12 months after re-TORe.

Results

Of 92 patients that underwent TORe, 10 required a re-TORe. Indication to re-TORe was weight regain alone in 3 patients, while the remaining 7 repeated the procedure due to both DS recurrence and weight regain. The median time between the primary TORe and the re-TORe was 28 months (range 14-64 years). Re-TORe was technically feasible in all patients. No peri-procedural adverse events occurred. Re-TORe outcomes are summarized in Table 1.

Conclusions

According to our experience, re-TORe is technically feasible and has good short and medium-term outcomes in terms of weight loss and DS control. As such, repeating the procedure should be considered before referring patients for revision surgery.

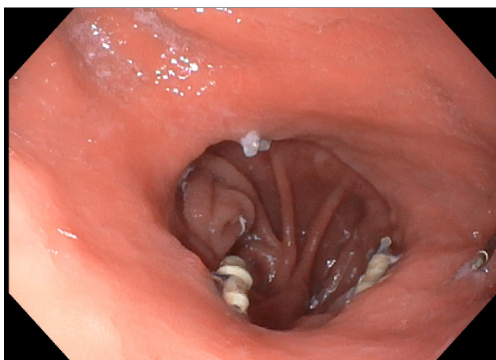


Figure 1. GJA dilation after primary TORe.

	Baseline	6 months	12 months	p [#]
Sigstad's Score	14 (4.5)	7 (1-14)	4.5 (1-14)	0.04
EADS	5 (1-10.5)	4 (0-4)	4.5 (0-8)	0.01
LADS	8 (5.5-9)	3 (0-4)	2.5 (0-4)	0.06

[#] Friedman test,
 Values are median (Q1-Q3)
 EADS= Early Arts Dumping Score questionnaire; LADQ= Late Arts Dumping Score questionnaire.

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REDO-OAGB AFTER RESTRICTIVE BARIATRIC PROCEDURES FAILING, INITIAL EXPERIENCE OF AN AFFILIATE SICOB CENTER

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Background

Despite many procedures have been proposed as revisional surgery after restrictive procedure, the ideal revisional procedure has not been well defined.

Objectives

Evaluate the efficacy and the safety of OAGB as revisional bariatric procedure in an affiliate SICOB center.

Methods

We retrospective analyze the prospective collected data of all consecutive patients which undergoing Redo-OAGB in our SICOB center from January 2020 to December 2021. Indications for surgery was weight regain, complication of previous bariatric procedure or insufficient weight loss after surgery. Data collected included biometric features (BMI - comorbidities - sex - previous surgery - ASA) intra operative data (operative time - type of anastomosis - intraoperative complications - blu test) post-operative data (length of stay - post-operative complications) 1 year follow-up data (complications rate).

Results

From January 2020 to December 2021 a total of 15 revisional OAGB has been performed. In seven cases as revision of a Sleeve gastrectomy for weight regain, in other eight cases as revisional procedure after banding removal for complications. The mean BMI was 42 ± 6 kg/m². The mean operative time was 88 ± 30 minutes. No intra-operative complications have been found. Only 1 post-operative anastomotic bleeding treated endoscopically has been found. At 1 year follow-up we found an EWL% of 52 ± 4.5 %. The mean length of stay was 4 ± 3 days. Only one patient during follow-up presented discomfort due to persistent diarrhea. No vitamin deficiencies have been found in any patients during one year follow-up.

Conclusion

OAGB should be considered as valid option for revisional surgery especially after restrictive bariatric procedures. Many difficulties could be found during gastric band revisional surgery due to poster adhesion or fundus dilatation, moreover also in those cases in our case series we does not found any complications.

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REFLUX AFTER BARIATRIC SURGERY, DOES LINX WORK?

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Introduction

Reflux after bariatric surgery is not uncommon and can negatively impact patients' quality of life. Laparoscopic sleeve gastrectomy is well known to induce de-novo reflux symptoms. Barrett's esophagitis has been widely reported after laparoscopic sleeve gastrectomy. Moreover, esophago-gastro-duodenoscopy is not routinely performed for all patient preoperatively to detect patients with silent reflux. In most cases, conversion of sleeve gastrectomy to a low-pressure procedure can solve the issue and relieve the symptoms. However, some patients still experienced these symptoms after gastric bypass.

Methods

It is a case series representing our early experience in performing LINX procedure for patients with intractable reflux after different bariatric procedures.

Results

Four cases with intractable symptomatic reflux were managed in our hospital using LINX device. Two of them had their reflux after laparoscopic sleeve gastrectomy. Two cases had intractable reflux after gastric bypass and one-anastomosis gastric bypass and were managed successfully using LINX device. All patients were followed up for 9-18 months with good results in terms of reflux symptoms and quality of life.

Conclusion

Reflux after bariatric surgery remains a common cause of patients' morbidity that negatively impact their quality of life. LINX procedure can present a valid option to tackle postoperative reflux with promising results.

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REFLUX AFTER OAGB: WHAT ARE THE RATE, ONSET, AND TREATMENT

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Background

Due to the movement of gastrointestinal contents to the gastric pouch and lower esophagus through gastrointestinal anastomosis, there is a concern for gastroesophageal reflux disease (GERD) after one anastomosis gastric bypass (OAGB) as one of most performed bariatric metabolic surgeries worldwide.

Objective

In this systematic review and meta-analysis we aim to investigate and report reflux after OAGB and know the efficacy of medical and surgical treatment options for this complication.

Method

Four main databases were reviewed for articles published by December 1, 2021 with relevant keywords.

Result

A total of 40 studies examining were included in this meta-analysis. The mean baseline BMI, BMI at GERD time, and BMI after reoperation were 45.72 ± 5.56 , 29.41 ± 3.53 and 28.06 ± 2.08 kg/m², respectively. In respect of follow up and interval between GERD and OAGB, the studies reported 35.99 ± 31.67 months and 17.08 ± 9.60 months, respectively. Meta-analysis reported 2% and 12% of patients experience GERD following primary and secondary OAGB, respectively in which 60% and 41% reported use of medical and surgical treatment for GERD. Response to medical and surgical treatments of GERD were 85% and 100%, respectively.

Conclusions

GERD, either acidic, bilious, or both, finds in about 2% of patients after OAGB. However, reflux may have both subjective and objective diagnosis, therefore, its reported rate had a wide range from 0 to 55% based on how the GERD was identified after OAGB. Furthermore, reflux may be underestimated due to different threshold levels in patient and awareness of this complication by surgeon in the pre-operative evaluations. Other factors that may impact the reported rate of reflux are the exact OAGB's surgical technique, unknown evaluation and eradication of *Helicobacter pylori* before surgery and its status during follow-up, and protonpump inhibitor (PPI) prescription and duration of treatment after surgery. GERD symptoms can be mild enough that could be tolerated without medical treatment, moderate that responds to acid-reducing agents (e.g. PPIs), or severe enough that is categorized as persistent or refractory that would need a surgical intervention. Rescue surgery such as Braun procedure (i.e. enteroentrostomy) or conversion to RYGB were reported to overcome the refractory and persistent severe GERD after OAGB.

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REINFORCED STAPLE LINE FAILURE AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY. CASE REPORT

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Background

The number of bariatric operations performed worldwide is continuously rising. Laparoscopic sleeve gastrectomy LSG is gaining popularity whether as a primary, staged, or revision operation. Major surgical complications, such as bleeding, leakage and gastric stenosis, occur in about 5% of cases in large series. Staple line reinforcement is widely used to reduce this kind of complications.

Objectives

The aim of this paper to analyse the possible management of the buttressing staple line failure after LSG at our institution.

Methods

A 48 years old male, BMI 53. Heavy smoker, with known history of chronic bronchial asthma. Underwent uneventful LSG and posterior hiatal hernia repair. Patient discharged on first post-operative day on liquid diet after upper GI-series follow up. Six days after surgery patient came to emergency department with severe epigastric and left upper quadrant pain, tachycardia, tachypnea, subfebrile temperature. On physical examination local tenderness and rigidity in the same area.

Results

On CT abdomen showed left subhepatic collection 4*10 cm, and free extravasation contrast agent. Patient underwent laparoscopic exploration, evacuated puss collection from the left subhepatic and identified 0.8 cm defect through the buttressing reinforced stable line 5cm below gastroesophageal junction. fixed a t-tube to convert a gastric leakage into controlled fistula. Second episode of deterioration happened six days later, patient became hypotensive, started bleeding form drain sites, hemoglobin dropped from 13,6 to 8,1. CT abdomen angiography demonstrated, a large subhepatic hematoma with no active bleeding. Patient was taken again to the operating room for laparoscopic exploration, subhepatic hematoma was evacuated and vigorous irrigation performed. No active source of bleeding was visualized. Identified two large defects 2 cm and 4 cm, below and above the level of t-tube fixation. We decided to refresh the gastric edges and primary suturing the defects using absorbable barbed suture. Feeding jejunostomy tube was inserted. 90 days follow up, patient improved, BMI decreased to 41. On upper GI-series the leaks became contained then resolved. Feeding tube removed.

Conclusion

The primary suture repair is feasible and seems to be safe for managing acute, early and intermediate staple line leakage after LSG, but need further study.

P-325

RELATIONSHIP OF TELOMERE LENGTH TO PREOPERATIVE WEIGHT LOSS

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Background

Obesity is characterised by the accumulation of chronic low-grade inflammation, which is associated with the accumulation of pro-inflammatory factors. Patients with severe obesity have been shown to have elevated markers of biological age understood as shorter telomeres. Observation of changes in telomere length occurs over a period of approximately two years. The most effective form of treatment for severe obesity is metabolic surgery. In order to achieve better therapeutic results, part of the qualification for surgery is the requirement for weight reduction in the preoperative period. To date, it has not been questioned whether the features of premature ageing in obese individuals may affect the preoperative weight reduction achieved.

Objectives

The aim of the study was to assess the association of telomere length with preoperative weight loss.

Methods

100 patients with severe obesity BMI ≥ 40 kg/m² or ≥ 35 kg/m² with comorbidity from the 2nd Department of General Surgery in Jagiellonian University Medical College from July 2020 to May 2021 on the day before surgery were included in the study. Body composition analysis was measured using TANITA, samples were collected for serum and EDTA, and PCR measurement of telomere length was performed from peripheral blood leukocytes. Body weight levels were retrospectively assessed at the time of eligibility for surgery (5-10 months before surgery).

Results

The mean preoperative weight loss was 7.8 ± 7.7 kg. Weight loss was not recorded in 19 patients (20%). The variable preoperative weight loss was divided into compartments. Priority was given to ensuring maximum equality of observations across compartments. The mean telomere length for the whole group was 3947.40 ± 1115.14 [bp \pm SD]. It was shown that preoperative weight loss significantly ($p < 0.05$) differentiated telomere length values. Statistically significantly ($p < 0.05$) higher values of the telomere length variable were found in those who lost 4-8 kg before surgery compared to those who lost up to 4 kg.

Conclusions

There is an association between achieving preoperative weight loss and telomere length in severely obese patients. Research on biological features that predispose to better preoperative preparation is an important line of research.

P-326

RELIABILITY OF THE LEFT GASTRIC ARTERY AS AN ANATOMICAL LANDMARK FOR SILASTIC RING PLACEMENT IN LAPAROSCOPIC BANDED SLEEVE GASTRECTOMY

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Background

Laparoscopic sleeve gastrectomy (LSG) is an effective surgery for weight loss, and the use of a Silastic Ring (SR) during the procedure has been shown to reduce postoperative complications and expansion of the gastric remnant. Recommendations of the placement of SR is between 4-6cm below the gastroesophageal junction (GEJ). Accurate placement of the ring remains a challenge, and the left gastric artery (LGA) has been proposed as a reliable anatomical landmark for placement. However, the reliability of this technique has not been well studied.

Objective

This study aimed to investigate the reliability of using the LGA as an anatomical landmark for the placement of the Silastic Ring (SR) in laparoscopic banded sleeve gastrectomy (LBSG).

Methods

A prospective observational study was conducted of 100 consecutive patients who underwent LBSG at our institution. The LGA was identified intraoperatively by the surgeon, and its location was recorded. The distance from the LGA to the GEJ was measured, and the SR was placed 1-2cm below the LGA. The accuracy of the LGA as a landmark for SR placement was evaluated by comparing the distance from the SR to the GEJ to the distance from the LGA to the GEJ. Intraoperative and postoperative complications were recorded.

Results

The LGA was successfully identified in all 100 patients, and the SR was successfully placed 1-2cm below the LGA in all cases. The mean distance from the LGA to the GEJ was 3.2 cm (range 2.5-3.8 cm), and the mean distance from the ring to the GEJ was 4.2 cm (range 3.5-4.6 cm). No intraoperative complications were reported, and there were no cases of SR displacement or migration in the immediate post operative period.

Conclusion

The left gastric artery is a reliable anatomical landmark for the placement of the SR in LBSG. Our study confirms that the use of the LGA as a landmark for Silastic Ring (SR) placement provides a consistent location and reduces the risk of postoperative complications. The distance measured from the SR to the GEJ is in line with the recommended placement technique

P-327

RESOLUTION OF HYPERTENSION IN PATIENTS WHO UNDERWENT PRIMARY BARIATRIC SURGICAL PROCEDURES IN THE INDIAN POPULATION – A TRUTH OR A MYTH?

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Background

Hypertension is one of the most common comorbidities associated with obesity and a significant risk factor for coronary artery disease and stroke. The incidence of hypertension in obese patients ranges from 40% to 70%, depending on various criteria. Obesity is an independent risk factor for diabetes mellitus (DM), cardiovascular disease (CVD), chronic kidney disease (CKD) and hypertension (HTN), the latter being the most common obesity-related comorbidity. Obese individuals usually present with HTN at a younger age than individuals with primary HTN.

Objective

This study aimed to assess the resolution rate of hypertension in the post-bariatric patient after one year in Indian patients.

Methods

150 patients were followed one year post bariatric surgery who primarily underwent OAGB/MGB, Sleeve gastrectomy and RYGB. All patients with a pre-existing diagnosis of hypertension and currently being treated with antihypertensive medication were included in this review. All patients were followed postoperatively in the outpatient clinic for one month, three months and 1-year intervals.

Results

There was a significant reduction in mean systolic blood pressure from 140 ± 17 mmHg preoperatively to 123 ± 18 mmHg at one month and ultimately to 120 ± 18 mmHg at 12 months postoperatively. Age, gender, race, preoperative BMI, preoperative blood pressure and preoperative medication requirements were similar between those with the resolution of hypertension and those without.

Conclusion

Weight loss associated with Primary bariatric surgery significantly improves systolic and diastolic blood pressure and is effective in discontinuing or a marked reduction of hypertensive medication requirements in many morbidly obese hypertensive patients.

P-328

RESOURCES, AIMS AND RESULTS OF A ONE-YEAR FELLOWSHIP PROGRAM IN BARIATRIC SURGERY FOCUSED ON UPPER GASTROINTESTINAL ENDOSCOPY

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Background

Bariatric surgery well-structured formation is a must in order to improve results and diminish complications but shows national and international differences, for example in endoscopy procedures performance (gastroenterologist vs surgeons). Two associations (Sociedad Española Cirugía Obesidad and Asociación Española de Cirujanos) co-worked to offer a program for young surgeons who are starting in the field of bariatric surgery.

Objectives

Summarize the means, aims and results of a one-year fellowship in a bariatric surgery unit of Spanish tertiary hospital, with special focus on surgeon-performed endoscopy.

Methods

An academic and clinic fellowship was performed by an under 35year surgeon during one year. Bariatric procedures performed as main surgeon/1st/2nd assistant, clinical protocols, endoscopy procedures, congress assistance and papers submitted/published are reviewed.

Results

Between January and December 2022, fellow participated in 53 bariatric surgeries (primary and revisional), assisted to AEC, SECO and EC-IFSO congresses (winning an IFSO scholarship), with one paper published (DOI: 10.1016/j.ciresp.2022.05.016) and other under review (JGSU-D-23-00398). After proper upper gastrointestinal endoscopy training by the endoscopy unit, fellow performed 87 endoscopies (5 of them, intraoperative).

Conclusion

With appropriate resources and dedication, a one-year fellowship program for bariatric surgery training offers a great opportunity for the development of the surgical career of young/junior surgeons and allows to start a surgeon-performed endoscopy program where feasible.

P-329

REVISION OF GASTRIC BANDING DUE TO INSUFFICIENT WEIGHT LOSS/ WEIGHT GAIN: A COMPARATIVE STUDY OF SLEEVE GASTRECTOMY AND ONE ANASTOMOSIS GASTRIC BYPASS

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Background

Laparoscopic adjustable gastric banding (LAGB) popularity has declined through the years, mainly due to high rates of weight regain/insufficient weight loss (WR/IWL).

Objective

To evaluate outcomes of patients undergoing conversion of LAGB and compare Sleeve Gastrectomy (SG) to One Anastomosis Gastric Bypass (OAGB).

Methods

A single-center comparative study of outcomes of conversion to OAGB or SG following LAGB due to WR/IWL.

Results

In the study, 276 patients were included; 151 underwent SG and 125 underwent OAGB. There was no significant difference in baseline characteristics except the mean time interval between surgeries was significantly higher for OAGB (10.9 years versus 8.9 years). The rate of major complications was 3.2% with no significant difference between groups. The mean follow-up time was 48.6 months for OAGB and 108.3 months for SG. The mean Body Mass Index at last follow-up was significantly lower in the OAGB group (31.3 versus 34.5; $p=0.002$), the mean percentage of total weight loss (%TWL) was higher in the OAGB group (25.1% versus 18.8%; $p=0.003$). There was higher rate of patients with resolution of type 2 diabetes (T2D) and hypertension (HTN) in the OAGB group (93.3% versus 63.1%; $p=0.02$ and 84.6% and 61.7%; $p=0.04$, respectively). Revisional surgery was required in 6% of SG group and 4% of OAGB group with no significant difference.

Conclusions

OAGB as a revisional surgery after LAGB for IWL/WR is associated with significantly higher %TWL and resolution of T2D and HTN when compared to SG.

P-330

REVISION PROCEDURES AFTER INITIAL ONE ANASTOMOSIS GASTRIC BYPASS FOR MANAGEMENT OF WEIGHT REGAIN

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Background

The failure of approximately 20 % of obese patients who undergo gastric bypass to maintain weight loss over the following 18-24 months is related to the surgical procedure, to the patient, or both. Although the underlying mechanisms are uncertain, one factor that has been postulated is the dilation of the gastric pouch and/or gastrojejunal anastomosis. The aim is to evaluate the different techniques to manage weight gain after the one anastomosis gastric bypass.

Material and Methods

The current series is a prospective study, from May 2015 to December 2019. A total of 30 patients with failed one anastomosis gastric bypass. These patients were divided in the following groups, Group A (12 patients): Refashioning of the pouch (trimming of the pouch or banding of the pouch), Group B (11 patients): Trimming of the pouch + Shortening of the common channel and Group C (7 patients): Trimming of the pouch + Refashioning of the stoma+ Shortening of the common channel + application a band. The demographic data and outcomes were studied by our multidisciplinary team.

Results

	Number of Patients	%EWL from primary operation to pre-revision	%EWL from pre-revision to post-revision*	%EWL primary operation to post-revision
Group A	12	19.6(±16.0)	31.6 (±21.6)	51.8 (±14.1)
Group B	11	22.7 (±1.2)	35.0 (±23.6)	57.1 (±8.4)
Group C	7	24.6 (±19.9)	33.5 (±12.35)	58.3 (±29.6)

Conclusion

There were no significant difference between the three groups. Thus, refashioning of the pouch or giving the patient more restriction is enough for weight loss without adding more risk by Refashioning of the stoma or Shortening of the common channel.

P-331

REVISION SURGERY FOR THE TREATMENT OF WEIGHT GAIN IN PATIENTS WITH GASTRIC RING MIGRATION

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Background

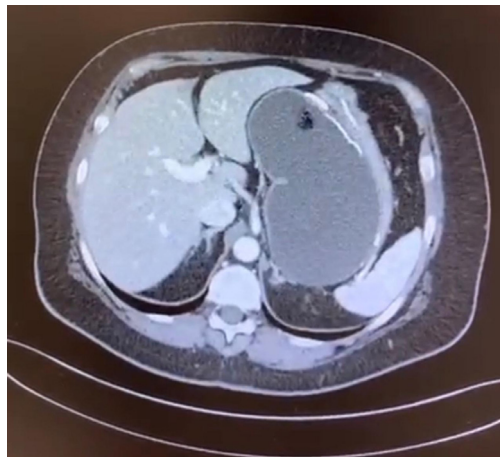
There is consistent evidence that excess body weight and anthropometric measurements related to fat distribution are correlated with increased risk of death. This chronic disease (obesity) with multifactorial etiology is becoming more and more recent in medical society, and with its evolution, for many years the gastric bypass technique with placement of a ring was a technique widely used as a surgical treatment. However, complications due to the ring may occur, such as its migration and obstruction of the jejunal pouch anastomosis, thus indicating revisional surgery.

Objectives

This study aims to cite revision surgery performed to reduce weight in patients who regained weight after ring migration.

Methods

As a methodology, it was prepared a case report of a patient, V.S.S.M, female, 60 years old, 125kg, who underwent gastroplasty with a bypass ring of silastic material by laparotomy on 03/01/2003, with a consequent decrease in weight to 70kg. After 18 years, the patient evolved with weight regain (90 kg) due to increased food intake capacity. Returning to the medical service, computed tomography was requested, showing gastric chamber with ring constriction of 1.2 cm at the level of gastrointestinal anastomosis, and marked distension of the gastric chamber and secondary esophagus to the ring next to the gastrojejunal anastomosis, and she underwent revision surgery. On 06/03/2023, the subsequent surgical team performed the resection of the jejunal loop associated with a vertical gastrectomy of the gastric pouch calibrated by a 32. fouchet and removal of the migrated gastric ring.



Results

After the surgical intervention, the patient was operated on and currently weighs 90 kg, with resolution of weight regain.

Final Comments

For patients who present migration of the ring and evolve with dilation of the gastric pouch, the revisional technique used without new anastomosis of the jejunal pouch proved to be effective and safe to treat the substenosis caused by the migration of the ring and quick to return the patient to their ideal weight after surgery.

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REVISIONAL BARIATRIC SURGERY: EXPERIENCE OF A HIGH-VOLUME CENTER

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Background

Bariatric surgery has increased worldwide as a primary procedure for obesity and its complications. Nevertheless, inadequate weight loss and reflux among other complications have increased too. Therefore, Revisional bariatric surgery is increasing (7% to 15%). Moreover, its complexity has been related to operative time and a higher risk of complications.

Objective

Describe the characteristics, experience, and outcomes of revisional procedures of a high-volume bariatric center bariatric in 2021.

Methods

A retrospective observational study with a prospective database was conducted. Patients who underwent revisional procedures were included. Baseline data, intraoperative, and evolution were obtained and analyzed. The surgical analysis included intraoperative time, type of procedure, complications, and endoscopic findings. Statistical analysis was performed according to the nature of the variables.

Results

92 patients required bariatric revisional surgery. Mean age of the patients was 46.2 years, 5.4 % were men and 94.6 % were women. Revisional procedures were band to sleeve gastrectomy (n=8), sleeve gastrectomy to Roux-en-Y gastric bypass (n=59), Band to Roux-en-Y gastric bypass (n=17), Roux-en-Y gastric bypass revision (n=6) and other (n=2). Mean body mass index in the group was 44.24 kg/m² before intervention. Mean operative time was 97.4 minutes, mean of blood loss was 20 cc ml. The in-hospital stay was 2 days. 1 leak was presented which required reintervention. No other intraoperative or early complications were presented.

Conclusions

Revisional bariatric surgeries are complex procedures. Notwithstanding, when performed by experienced surgeons can be considered feasible, and safe with low complication rates. History of more gastric-related procedures presented higher morbidity and complexity.

Keywords: Obesity, Revisional Bariatric Surgery, Bypass revision, Band revision, Sleeve gastrectomy.

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ROBOTIC ENDOSCOPIC SLEEVE GASTROPLASTY FOR THE TREATMENT OF OBESITY: AN INTERIM ANALYSIS OF A MULTICENTER PILOT STUDY

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Background

Endoscopic gastric volume reduction is a safe and effective technique for inducing weight loss in patients with obesity. They function mainly by inducing satiation and satiety and impacting gastric motility. However, the technical success of the procedure is primarily influenced by the operator's skills. The available endoscopic techniques have a significant learning curve to achieve mastery over the technique. Robotic endoscopy promises to overcome the learning curve limitation and minimize operator variation. Our early experience with automated robotic endoscopy (EndoZip™, Nitinotes, Israel) for endoscopic gastric volume reduction has been shown to be safe. The device has been made more sophisticated and fully automated with multiple iterations (Figure 1). We aim to present the safety and efficacy of the newer, fully automated robotic endoscopic suturing system for obesity.

Objectives

This multicenter, prospective, single-arm study aimed to assess the safety and efficacy of the EndoZip™ system for the treatment of obesity.

Method

Patients with a BMI of 30 to 40 kg/m² unable to lose weight with non-invasive approaches and deemed suitable for bariatric endoscopic according to the multidisciplinary team were enrolled in 3 centers (Spain, Italy, and Israel). The efficacy of the EndoZip™ system was assessed. %TBWL, and % of patients with %TBWL ≥5% were evaluated via ANCOVA model. Safety data and physician's satisfaction with device use were evaluated via descriptive statistics.

Results

Forty-five patients underwent robotic endoscopy-assisted gastric volume reduction. The mean ±SD age was 44 ±8 years, and BMI was 34.6 ±2.9 kg/m², respectively. The majority of the patients were female (89%). the average procedure time was 30 minutes. We used an average of 3.9 sutures; At 12 months, the mean ±SD %TBWL was 13.5 ± 10.4%. We observed >5% TBWL in 79.4% of the patients (Table 1). All endoscopists found the device easy to use. Serious adverse events occurred in 2 patients (bleeding and gastric perforation). The bleeding was stopped with endoscopic clipping, and the gastric perforation required surgical closure. No mortality occurred.

Table 1: ANCOVA model results	1 month	2 months	4 months	6 months	12 months
Adj. mean of %TBWL. (Lower 95% CL)	7.4% (6.6%)	10.3% (8.9%)	13.3% (11.5%)	14.5% (11.7%)	13.5% (10.4%)
% of patients with TBWL ≥5% at 12 months (Lower 95% CL)	78.6% (63.2%)	92.7% (80.1%)	92.3% (79.1%)	85.0% (70.2%)	79.4% (62.1%)
Per Protocol Analysis					

Conclusion

Robotic endoscopic suturing using the automated EndoZip™ system is safe, user-friendly, and effective in inducing weight loss in patients with obesity.

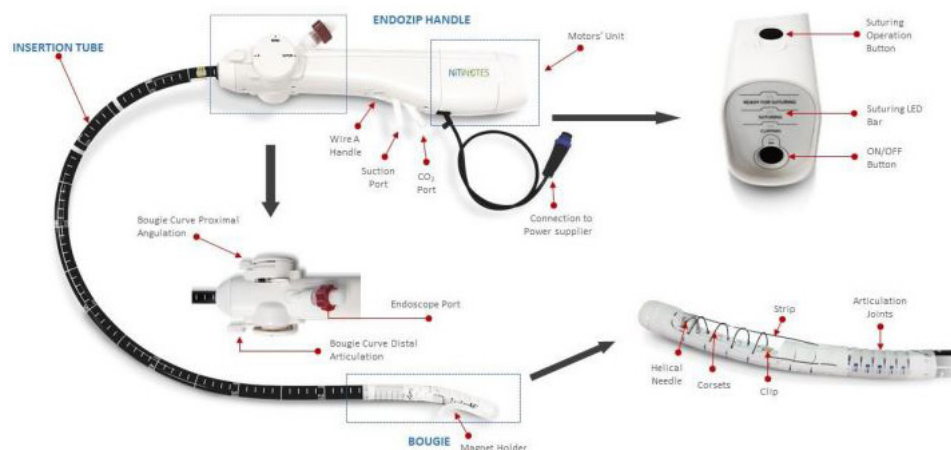


Figure 1. EndoZip™ device.

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ROBOTIC SURGERY IS NOT ASSOCIATED WITH DECREASED COMPLICATION RATES IN HIGH BMI PATIENTS (BMI>60)

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Introduction

The advantages of robotic metabolic and bariatric surgery over laparoscopy continue to be investigated. Robotic surgery is anecdotally advantageous in higher BMI patients. In this study, we assess if robotic surgery decreases post-operative complications in primary and revisional sleeve gastrectomy (SG) and Roux-en-Y gastric bypass (RYGB) after stratifying by preoperative BMI.

Methods

Primary or revision SG and RYGB patients in the Metabolic and Bariatric Surgery Quality Improvement Program from 2015 to 2021 were analyzed. Patients were stratified by preoperative BMI (<50, 50-59, ≥60). Multivariable modeling using Poisson regression was performed to calculate incidence rate ratios (IRR) of postoperative complications for robotic compared to laparoscopic surgery after controlling for procedure, age, gender, race, BMI, functional status, ASA class, and operative length. Results are reported as IRR [95% CI]. Here we highlight rates of sepsis, transfusion, leak, ICU admission, reintervention, reoperation, readmission, and an aggregate measurement of intra/post-operative complications.

Results

For primary surgeries, 838,965 patients had BMI<50; 187,510 had BMI 50-59; and 52,563 had BMI≥60. Within these respective groups, 12.4%, 12.8%, and 13.4% of cases were robotic. For revision surgeries, 78,812 patients had BMI<50; 10,612 had BMI 50-59; and 2,359 had BMI≥60. Within these respective groups, 14.1%, 13.8%, and 13.4% of cases were robotic. Robotic surgery did not decrease the rate of any of the aforementioned postoperative complications in primary or revision patients with BMI≥60, but it was associated with a greater rate of sepsis in revision patients (3.86[1.04-14.39]). Robotic surgery decreased the aggregate rate of complications in revision patients with BMI < 50 (0.81[0.71-0.93]). In revision patients with BMI 50-59, it decreased the rate of reintervention (0.58[0.36-0.94]) and ICU admission (0.49[0.25-0.98]). Robotic surgery was associated with an increase in aggregate rate of complications in primary patients with BMI < 50 (1.12[1.05-1.18]), and BMI 50-59 (1.13[1.01-1.27]).

Conclusion

Our analysis of the 2015-2021 MBSAQIP is the most comprehensive analysis of robotic surgery outcomes to date. Robotic surgery does not decrease the rate of postoperative complications in patients with BMI>60, although it is associated with decreased rate of reintervention and ICU admission in revision patients with BMI 50-59.

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ROBOTICALLY ASSISTED ROUX-EN-Y GASTRIC BYPASS: COMPARISON OF TWO DIFFERENT PLATFORM WITH A PROPENSITY SCORE MATCH ANALYSIS

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Introduction

The role of robotic platforms for bariatric surgical procedures is controversial and under evaluation. In spite of the excellent results in terms of postoperative outcome, concerns are mainly related to costs with respect to the laparoscopic counterpart. The cost of robotic surgeries are decreasing due to the introduction of new platforms. Nonetheless the newly introduced platforms should be compared in terms of effectiveness and outcome with the da Vinci® Robotic Surgical System (Intuitive Surgical, Sunnyvale, CA) (daVinci-RSS)

Objectives

We aimed to compare perioperative outcomes of Roux-en-Y Gastric Bypass (RYGB) performed with the new robotic platform Hugo® Robotic-Assisted Surgery System (HUGO-RAS) (Medtronic, Minneapolis, MN, USA) and the daVinci-RSS

Methods

The HUGO-RAS platform was adopted in our clinical practice for bariatric procedures since January 2023. Patients who underwent HUGO-RAS RYGB were compared with a propensity score matched control group identified among those patients who underwent daVinci-RSS RYGB between March 2020 and February 2023.

Results

Among 15 patients who underwent HUGO-RAS assisted RYGB, ten patients with a minimum postoperative follow up of one months were identified. Ten controls who underwent daVinci-RSS during the study period were identified with PSM, successfully eliminating preoperative differences between groups. No significant difference was found between groups in terms of in postoperative stay, with a median of 2 days (2 - 2) and 2 (1 - 2), respectively ($p=0.354$). Mean overall operative time and docking time were similar between the two platforms ($p=0.064$ and $p=0.162$, respectively). No significant difference was observed in early (≤ 30 days) post-operative complications rate and post-operative ICU admission rate ($p=0.136$ and $p=0.305$, respectively).

Conclusions

The results of the present study showed that when adopted by teams experienced in robotic procedures, HUGO-RAS system could provide results similar to those of the daVinci-RSS, even at the beginning of the experience. Each platform has its own characteristics, advantages and disadvantages. However, it is important to note that one of the main limitations of the HUGO-RAS system is the present non-availability of robotic stapler and energy devices, which are of utmost importance in bariatric procedures.

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ROLE OF BARIATRIC SURGERY IN THE CONTROL AND TREATMENT OF HYPERTENSION: SINGLE CENTER EXPERIENCE

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Introduction

One-anastomosis-gastric bypass (OAGB) and sleeve gastrectomy (SG) account for the vast majority of bariatric procedures in the Middle East. Several studies suggested improvement of hypertension following bariatric surgery but none of these studies compared the effect of these procedures on blood pressure control in the Middle East population

Objective

To determine and compare the effect of one-anastomosis-gastric bypass (OAGB) and sleeve gastrectomy (SG) on blood pressure control and long-term improvement of hypertension.

Methods

We reviewed the files of 128 patients with hypertension who underwent OAGB or SG in a bariatric center a teaching hospital and had a minimum of 2-year follow-up. Data collection included general demographics of the patients, type of the procedure, preoperative and postoperative number of anti-hypertensive medications. Patients were classified into three groups according to the change in the number of postoperative anti-hypertensive medications needed to keep their blood pressure controlled: Group 1 (Resolution: off Medications), Group 2 (Partial resolution: Drop in the number of medications) and Group 3 (No resolution: same or increased number of medications)

Results

At a median postoperative follow-up of 3 years (range 2-4), hypertension was controlled in 91.3% of patients post OAGB and in 67.2% post SG ($P < 0.005$). Group 1 with complete resolution included 54.75% after OAGB and 43.12% of patients following SG. Group 2 showed partial resolution in 33% and 26.05% of patients following OAGB and SG respectively. No resolution was noticed in 12.25% and 30.83% of patients following OAGB and SG respectively.

Conclusion

Bariatric surgery seems to have a significant role in blood pressure control and remission of hypertension with OAGB showing better results than SG on long-term follow up.

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ROLE OF BARIATRIC-METABOLIC SURGERY PRIOR TO RESECTION IN COLORECTAL CANCER PATIENTS WITH OBESITY : 1-2 YEAR OUTCOMES

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Background

Obesity is associated with poor health outcomes, increasing risk for developing and exacerbating severity of comorbidities. Seen in 20% of patients with all cancers, it complicates both diagnosis and treatment. Surgical access for tumour resection, ileostomy formation, as well as wound management in open resections are important operative concerns. Increasing incidence of cancer and obesity calls for review of current practice to improve patient outcomes. Indications for bariatric surgery are not well defined, however, rapid weight loss while undergoing neo-adjuvant chemoradiation may benefit surgical outcomes without delaying cancer resection. Here we present 1-2year outcomes of colorectal cancer (CRC) patients with obesity who underwent simultaneous neo-adjuvant chemoradiation and bariatric-metabolic surgery prior to surgical resection.

Method

Retrospective case (Sept 2015-Aug 2021) series from a high-volume Bariatric Surgery multi-disciplinary-team meeting at a centre with Colorectal Cancer services.

Results

5 patients with CRC (2 rectal, 2 sigmoid, 1 caecal) and BMI >45kg/m² were referred for bariatric surgery while undergoing neo-adjuvant chemoradiation. Laparoscopic Sleeve Gastrectomy (LSG) was performed in 3 patients (2 unfit) with subsequent cancer resection in 4-6months (1 Laparoscopic Low-Anterior-Resection with defunctioning-loop ileostomy for rectal cancer, 2 Laparoscopic Anterior-Resections for sigmoid cancer). All resections were complete, hospital stay ranged 6-8 days, 1 reported complication of transient ileostomy obstruction. Patients included 2 females, 1 male, mean age 51 yrs, BMI at referral 49.06-57.41kg/m². All patients lost weight rapidly post-LSG prior to CRC resection: BMI 39.67-46.54kg/m² with average loss of 28.2kg (range 21.6-35.2kg). At 1-2yr follow-up, patients demonstrated further weight loss: BMI 27.35-42.45kg/m² with average weight loss of 51.1kg (range 17.5-72.8kg).

Conclusion

Internal referral rates for Bariatric Surgery in cancer patients is low. Criteria from Colorectal MDT is BMI >45kg/m² and likelihood of stoma formation to protect anastomoses from leaks. All 3 cases were successful in weight loss and cancer outcomes. We suggest referrals from cancer MDTs follow standard NHS criteria for consideration of Bariatric-Metabolic Surgery : BMI >40kg/m² or >35kg/m² with comorbidities. Large-scale well-designed studies are needed to evaluate both short and long-term outcomes of managing co-existing cancer and obesity.

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ROLE OF ESOPHAGOGASTROSCOPIC GUIDANCE IN MINIMIZING LAPAROSCOPIC BARIATRIC SURGERY RELATED MORBIDITY

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Background

Postoperative staple line and gastro-jejunal anastomosis (GJA) leak is one of the most serious complications after LSG and LRYGB. GJA leak has reported frequencies of 0.3–5.1% with mortality ranging from 1.5 to 3%. Early postoperative bleeding and anastomotic stricture are also significant complications in patients after LRYGB with reported frequencies of 3.4% to 11.1%. The use of a leak test is a common practice in bariatric surgery. Some surgeons advocate for an intra-operative endoscopy for their leak test, while others utilize air via a form of an oral gastric tube. Previous articles have demonstrated the value of endoscopy in surgical procedures and the low risk associated with its use.

Objectives

The current study will be conducted to assess the safety and efficacy of using endoscope that serves as the bougie tube and then it is already in place for early detection of complications e.g , leakage (positive air leak test) ,maladjustment of lumen size (sleeve or stoma) and bleeding .

Methods

Between September 2019 and August 2021, 100 laparoscopic bariatric surgery were performed. For sleeve gastrectomy, endoscope was used as Bougie tube then staple line will be checked, a positive air leak test was done. For bypass surgery , the stoma was entered by the endoscope for checking staples, patency and early detection and dealing with leakage and bleeding.

Results

Concerning intraoperative complications, no patient had bleeding. two patients had leak which was corrected by reinforcement suture. Another patient had twisting which was corrected. Postoperatively, all patients did not develop leak, bleeding or obstructive symptoms. Three patients had postoperative vomiting which was corrected by prescribing antiemetics. There were no statistically significant associations between incidence of intra/postoperative complications and either age, weight, body mass index, operative time or comorbidities.

Conclusion

Overall, our experience has been very positive with utilization of intraoperative endoscopy after creation of our sleeve gastrectomy. Our leak rate is extremely low and occurred very early in our experience, and we believe that taking the extra time to perform a leak test using an endoscope will pay dividends for both the practitioner and the patient.

P-339

ROLE OF ROUTINE ABDOMINAL ULTRASOUND BEFORE BARIATRIC SURGERY: REVIEW OF 937 PATIENTS

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Introduction

The routine use of preoperative abdominal ultrasound for patients undergoing bariatric surgery is controversial. Despite the fact that some physicians routinely implement it; others still consider it not necessary and not cost effective because it does not have a clear clinical significance in the preoperative preparation of bariatric patients.

Objective

Our study aims to determine whether abdominal ultrasound should be routinely implemented before bariatric surgery or not.

Patients and Methods

We reviewed the medical records of all patients who had a preoperative abdominal ultrasound before bariatric surgery June 2014 and December 2016. Patients were divided into 4 groups: Group 0 included patients with normal abdominal ultrasound, Group 1 included abnormalities that did not affect the timing or type of procedure, Group 2 included findings that did not affect the surgical plan but needed postoperative follow up and Group 3 included abnormalities that had a direct impact on the procedure.

Results

The files of 1120 patients were reviewed. The ultrasound results were not present in 183 files, they were excluded, and the remaining 937 files were included. The mean age of patients was 37 \pm 12 years, 589 (63%) were females and 348 (37%) were males. The mean BMI was 45.1 \pm 9.8 kg/m². Ultrasound was normal in 354 (37.7%) of patients and abnormal in 583 (62.3%) of patients.

Conclusion

Routine abdominal ultrasound does not seem to have an important part in the preoperative preparation of patients planned for bariatric surgery. Further studies could be helpful in further discussing this role and building up clear solid evidence and guidelines that could be approved by international bariatric associations regarding the indication of preoperative abdominal ultrasound before bariatric surgery.

P-340

ROLE OF SURGERY IN MANAGEMENT OF INTRA-GASTRIC BALLOON COMPLICATIONS

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Introduction

In Saudi Arabia, the prevalence of obesity has multiplied in the last decades leading to a surge in bariatric surgery and other endoscopic modalities. The intra-gastric balloon (IGB) is the most used endoscopic modality. Surgical management for IGB complications is required for any gastrointestinal perforation and/or obstruction. However, the literature seems to underestimate these complications.

Methods

A retrospective descriptive study was conducted in a tertiary hospital in Saudi Arabia from Jan 2017 to Dec 2021 including all patients with complicated IGB who necessitated any surgical procedure. Exclusion criteria were patients with complicated IGBs that were only managed conservatively and any complications related to other bariatric procedures.

Results

A total of 326 patients were admitted with different complications after bariatric procedures. Of them, six patients were referred due to IGB complications that necessitated operative intervention. All patients were young females. Three patients had gastric wall perforation and were managed by endoscopic removal of the IGBs followed by exploratory laparotomy. One patient had an intestinal obstruction on top of a migrated IGB that was surgically removed. One patient had failed endoscopic retrieval of IGB and required a laparoscopic gastrostomy. Another patient had esophageal rupture that required left thoracotomy, pleural flap and insertion of an esophageal stent. All cases were discharged and followed up with no related complications.

Conclusion

IGB is an endoscopic alternative, within certain indications, for the management of obesity. However, surgical management may be necessary to manage its complications including gastrointestinal perforation, IGB migration and failure of endoscopic removal.

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ROLE OF THE BILE IN BILIO-PANCREATIC LIMB IN METABOLIC IMPROVEMENT EFFECT AFTER DUODENAL-JEJUNAL BYPASS

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Background

Duodenal-jejunal bypass (DJB) is an experimental procedure of metabolic surgery without restrictive elements. Changes in bile acid (BA) dynamics and intestinal microbiota have been found to be related to metabolic improvement effects of DJB, however, the mechanism remains unclear. In our previous studies with obese diabetic rats, we found that the biliopancreatic limb (BPL) plays an important role in the mechanism of metabolic improvement after DJB, which is caused by reabsorption of bile acid in the BPL.

Objectives

The aim of this study is to elucidate the mechanism of metabolic improvement after DJB, especially with respect to the significance of the presence of bile in the BPL. In this study, we established a new procedure in which bile does not flow into the BPL.

Methods

Otsuka Long-Evans Tokushima Fatty rats with diabetes were divided into three groups: one sham group and two DJB groups. Duodenal-jejunal (D-J) anastomosis was performed proximal to papilla Vater in DJB group. On the other hand, in DJB-D group, a new DJB model, D-J anastomosis was performed distal to papilla Vater to prevent bile from flowing into BPL. The lengths of the BPL were set equally as 30cm in both DJB groups. Body weight, food intake, glucose tolerance, BA concentrations in blood and intestinal contents, and gut microbiota were assessed postoperatively.

Results

The effect of suppressing weight gain and improving glucose metabolism was observed only in DJB group, but not in DJB-D and sham groups. BA concentrations also elevated only in DJB group. In the gut microbiota of the DJB group, the number of Firmicutes and Bacteroidetes tended to decrease, and the number of Actinobacteria tended to increase. However, DJB-D group showed no apparent change in gut microbiota, almost same as the sham group.

Conclusion

The presence of bile acids in BPL is important in the mechanism of metabolic improvement effect after DJB. And gut microbiota may be involved in these processes.

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ROUTINE EARLY COMPUTED TOMOGRAPHY SCANNER AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY FOR SEVERE OBESITY: IS THERE AN INTEREST FOR HIGH-RISK PATIENTS? A PROSPECTIVE STUDY

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Background

Laparoscopic sleeve gastrectomy (LSG) is the most frequently performed bariatric procedure worldwide. Postoperative staple line leak and intraabdominal hemorrhage are two feared complications of this procedure that can increase its associated morbidity and mortality.

Objectives

To evaluate the value of routine early computed tomography (CT) scanner examination in the early diagnosis of complications in high-risk patients with severe obesity undergoing LSG.

Methods

This was a prospective, non-randomized study including all patients undergoing LSG in our department from 2014 to 2020. Patients presenting at least one potential risk factor for postoperative gastric leak and bleeding (as defined by the current literature) were included. Primary endpoint was the efficacy of postoperative day (POD) 2 CT-scanner examination in diagnosing these complications.

Results

1051 high-risk patients were included. Median age was 44 years. Early postoperative surgical complications occurred in 48 patients (4.5%): 25 (2.3%) intraabdominal hemorrhage and 23 (2.2%) staple line leak. Early CT-scanner detected intraabdominal bleeding or hematoma in 22/25 patients, with 95.6% sensitivity (Youden index = 0.95), while specificity was 100%, positive predictive value (PPV) 100% and negative predictive value (NPV) 99.9%. Sensitivity of early postoperative CT-scanner was 43.4% (10/23 patients; Youden index = 0.43) for staple line leak detection, with specificity of 100%, PPV 100% and NPV 98.7%.

Conclusion

POD 2 CT-scanner in high-risk patients with severe obesity undergoing LSG is an excellent tool for early diagnosis of intraabdominal hemorrhage, but sensitivity remains low for staple line leak detection. Close postoperative clinical follow-up of these patients is essential and any suspicion of postoperative surgical complication should motivate the performance of a CT-scanner.

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ROUTINE POST-OP BLOOD TESTS IN PATIENTS UNDERGOING BARIATRIC SURGERY – TIME TO REVIEW THE SURGICAL DOGMA?

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Background

It is standard practice to do post-op blood tests in patients undergoing major elective surgery.

Objectives

To assess the impact of a selective approach to ordering post op blood tests based on clinical parameters on patient outcomes following bariatric surgery

Methods

All patients undergoing elective bariatric surgery in a high volume centre over a four year period were included in the study. Patient outcomes in terms of complications and readmission rates were analysed in patients who did not have routine post operative blood tests.

Results

1009 patients (105 gastric band removal, 756 gastric bypass, 104 sleeve gastrectomy and 44 revision surgery) were included in the study. Demographics include: Age 46(20-77), M:F = 190-819; BMI – 44.3 (20.6-62); Wt. – 120.3 Kg (57.4 – 190.7). Median length of stay was 1.7 (1-23) with 79% 1 day discharge. 783 (78%) patients did not have routine post op blood tests as they were assessed to be clinically well. 6 of these patients (0.8%) were readmitted with complications – 2 with obstruction (on day 2), 2 with staple line bleeds (day 2), 1 with port site bleed and 1 with haemetemesis secondary to anastamotic ulcer on day 6. There was no mortality in this group of patients. Cost analysis revealed significant savings (£325/365 euros per patient; £250 K/ 282 K euros)

Conclusions

Selective use of post-op blood tests in patients undergoing elective bariatric surgery based on clinical parameters is safe and does not result in compromised care of this complex group of patients. The significant savings as a result can be used in funding more procedures.

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ROUX LIMB GANGRENE WITH THE GASTRIC RING: A LESSER-KNOWN, BUT CATASTROPHIC COMPLICATION OF THE BANDED-ROUX-EN-Y GASTRIC BYPASS (BRYGB)

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Background/Introduction

Some well-known complications associated with the non-adjustable gastric ring used for banded Roux-en-Y gastric bypass (BRYGB) are, food bolus obstruction, band erosion and band slippage, to name a few. However, roux (alimentary) limb gangrene, due to herniation of the bowel loop between the gastric ring and pouch, has no mention in literature.

Objective

To demonstrate a previously unreported complication post BRYGB.

Methods

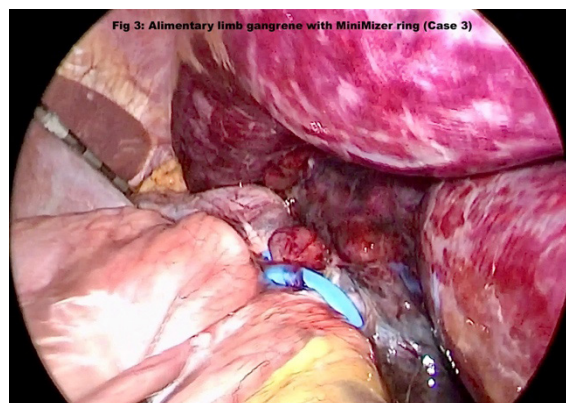
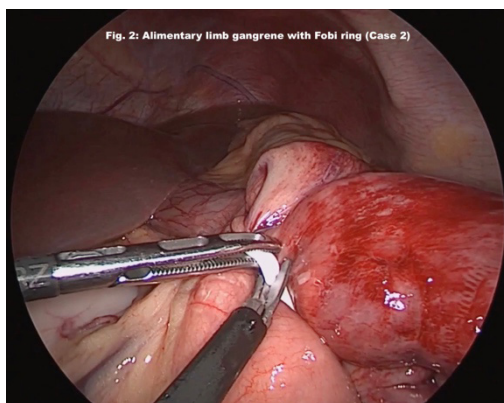
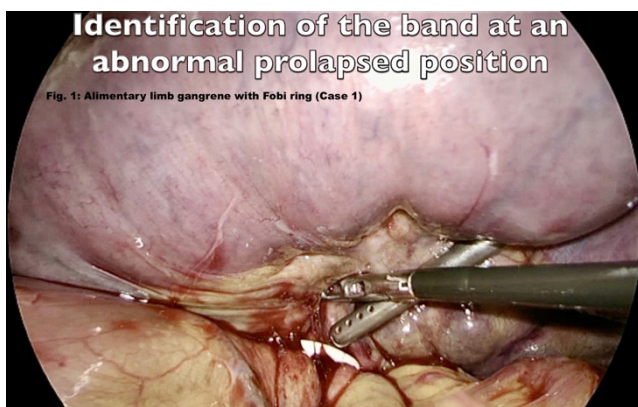
We report a series of 3 patients who presented with alimentary limb gangrene 3-4 years post BRYGB.

Results

All 3 patients, incidentally, were women, within the age group of 35-45 years, and underwent BRYGB (alimentary limb 150 cm and biliopancreatic limb 100 cm) using either Fobi ring (2 patients) or MiniMizer ring (1 patient) with 2-point fixation to the pouch, 2 cm above the gastrojejunostomy. All three patients presented 3-4 years post BRYGB, with an average total body weight loss (TWL%) of 41.28% the time of presentation. All three patients presented with abdominal pain, non-bilious vomiting, and hematemesis. They had abdominal tenderness and guarding. X-Ray abdomen erect showed dilated small bowel loops, CT-scan showed evidence of distended, ischemic or gangrenous small bowel loops. Immediate diagnostic laparoscopy was planned in all three cases. Intraoperative findings showed a loop of gangrenous small bowel extending from the gastrojejunostomy to the jejunojejunostomy (alimentary limb). The alimentary limb had herniated between the pouch and the ring, the ring having formed a tight obstruction around the loop of herniated bowel, leading to compromise of blood supply and eventually gangrene of the entire alimentary limb. Small bowel resection and anastomosis with complete reversal of BRYGB was carried out in all the three cases.

Conclusion

To the best of our knowledge, there is no existing literature describing this complication. Highlighting this previously unreported, catastrophic, and potentially fatal complication, will help guide early recognition, diagnosis, as well as timely and appropriate management. Additionally, it might help us answer some technical questions related to this surgery – Does a longer alimentary limb make it more prone to herniating through the space between the gastric pouch and the ring? Is two-point fixation of the ring to the pouch not sufficient?



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ROUX-EN-Y GASTRIC BYPASS (RYGB) AND ONE-ANASTOMOSIS GASTRIC BYPASS (OAGB) ARE SUPERIOR TO SLEEVE GASTRECTOMY (SG) FOR REMISSION OF TYPE 2 DIABETES MELLITUS – 2 YEAR FOLLOW UP OF 130 PATIENTS

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Background

Conflicting evidence exists regarding which procedure is most effective for remission of type 2 diabetes mellitus (T2DM). This may be affected by body composition which is influenced by gender and age.

Objectives

To identify which bariatric-metabolic surgery procedure(s) are most effective in T2DM remission and lowering of HbA1c; to identify if gender or age are contributing factors.

Methods

A prospectively-maintained database was analysed for adult T2DM patients undergoing Roux en Y gastric bypass (RYGB), sleeve gastrectomy (SG) and one-anastomosis gastric bypass (OAGB) between February 2015 and February 2020 in a single institution. Follow up period was 2 years. Outcome measures include T2DM remission (HbA1c <48 mmol/mol), HbA1c reduction, % total weight loss (TWL), % excess weight loss (EWL). Analysis was performed in Stata MP v.17.

Results

130 patients included 85 females (65%), 45 males (35%). Mean age 51 ±9.2 years. Twenty-eight patients underwent SG (21.5%), 73 RYGB (56.1%), 29 OAGB (22.3%). 99 (76.2%) achieved T2DM remission. Remission rate of 46.4%, 83.6% and 86.2% was demonstrated in SG, RYGB and OAGB (p<0.001). Mean reduction in HbA1c was 1.22 ±16.5, 18 ±13.7 and 14 ±15.8 mmol/mol for SG, RYGB and OAGB (p<0.001). Percentage TWL and EBWL were greatest for OAGB but not statistically significant (p=0.65, p=0.18). There was no significant difference in remission rate, reduction in HbA1c or %TWL for sex (p=0.326, p=0.31, p=0.11) or age group (p=0.728, p=0.26, p=0.11).

Conclusion

T2DM remission rate and reduction in HbA1c was significantly greater in OAGB and RYGB versus SG, without significant difference in %TWL or %EBWL. This is in contrast to previously published studies. Sex and age group did not significantly influence %TWL, %EBWL, remission rate or reduction in HbA1c, suggesting that these factors could not be used as indicators of body composition. Limitations include small sample size. Further RCTs are warranted comparing SG, RYGB and OAGB for T2DM remission.

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ROUX-EN-Y GASTRIC BYPASS AND INTESTINAL METAPLASIA: REMNANT GASTRECTOMY IN THE SAME SURGICAL ACT

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Background

Obesity is a risk factor for certain types of cancer, including gastric adenocarcinoma. Furthermore, intestinal metaplasia is well-known as a precancerous lesion, it precedes dysplasia before gastric adenocarcinoma. Gastric polyps are another gastric cancer (GC) risk factor, although finding dysplasia in sporadic fundic polyps is rare. The main disadvantage of Roux-en-Y gastric bypass (RYGB) is the unfeasible access to the gastric remnant by conventional endoscopy. Considering the potential risk of GC in some bariatric patients, our group propose a remnant gastrectomy during RYGB for this group.

Objectives

Our aim is to describe the preliminary results of a series of remnant gastrectomy in 1-step approach during RYGB.

Methods

Observational retrospective study including patients underwent RYGB with remnant gastrectomy in 1-step approach performed in our center (secondary Spanish hospital) between 2012-2022.

Results

We collected a sample of 8 cases (7 women, median age of 59 (41-63), median presurgical BMI of 39,8 (34,6-48)) with a comorbidity of: 25% diabetes, 75% sleep apnea, 62,5% hypertension, 50% dyslipidemia and 12,5% GERD. The reason to indicate gastrectomy of the gastric remnant was intestinal metaplasia in 5 cases (62,5%) and multiple gastric polyposis in 3 cases (37,5%). There were not intraoperative complications. Surgical time was 141' (95-260). Despite adding the remnant gastrectomy, hospital stay remained in 2 (2-6) days. After surgery, there were no 30-day complications or 90-day mortality. Regarding histological outcomes after surgery, intestinal metaplasia was confirmed in all cases except one (4 cases, 50%), 2 cases had hyperplasic polyposis without dysplasia and in one case a poor differentiated neuroendocrine tumor was found. Moreover, chronic atrophic gastritis was confirmed in 3 cases (37,5%). No complications were found during follow-up. One year after surgery median BMI was 27,3 (32,8-23,8), achieving an excess weight loss of 89,66% after a year.

Conclusion

Remnant gastrectomy in 1-step approach during RYGB is reproducible and feasible in experimented hands and postoperative results are similar to simple RYGB. We believe that it should be considered in bariatric patients with high risk factors for GC. Nevertheless, this is a small sample and further studies are mandatory with more cases and extended follow-up.

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SAFETY AND EFFECTIVENESS OF BARIATRIC SURGERY IN PATIENTS WITH OBESITY: A NATIONWIDE COHORT STUDY

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Background

Bariatric surgery is the most effective treatment in patients with obesity. There are few nationwide cohort studies evaluating the safety and effectiveness of bariatric surgery.

Objective

This study aimed to evaluate surgical trends after insurance coverage implementation and analyze the surgical outcomes of bariatric surgery in a nationwide cohort study.

Methods

A retrospective analysis of bariatric surgery in patients with obesity was conducted using data from the Korean National Health Insurance System Claims. We evaluated short-term outcomes.

Results

Between January 2019 and December 2021, 7360 patients who were scheduled to receive bariatric surgery for obesity were enrolled in this study. There were 5,139 sleeve gastrectomies (69.8%), 927 Roux-en-Y gastric bypass (12.6%), 375 biliopancreatic diversions with duodenal switch (5.1%), and 895 gastric banding-related surgeries (12.2%). The median postoperative hospital stay was 5 days. The rates of major complications and mortality within 30 days postoperatively were 2.05% and 0.01%, respectively. The readmission rate within 30 days postoperatively was 5.49%. The discontinuation rates 1 year after surgery were 40.3% for antihypertensive medication, 52.8% for diabetes medication, and 44.8% for lipid-lowering medication.

Conclusion

Surgical outcomes of bariatric surgery appear safe and feasible with acceptable short-term outcomes. Moreover, bariatric surgery was associated with a higher incidence of discontinuation of the obesity-related medication.

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SAFETY AND EFFICACY OF FUNCTIONAL ONE ANASTOMOSIS GASTRIC BYPASS AS PRIMARY AND REVISIONAL BARIATRIC PROCEDURE: COMPARISON WITH ONE ANASTOMOSIS GASTRIC BYPASS AND MID-TERM RESULTS ON 469 PATIENTS

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Background

Aim of this study was to investigate safety and efficacy of functional one anastomosis gastric bypass (fOAGB).

Methods

Retrospective study conducted on patients treated with fOAGB. Patients who underwent fOAGB between 2017 and 2021 were compared with those who underwent one anastomosis gastric bypass (OAGB). Primary outcome was % excess BMI loss (%EBMIL) at one-year follow-up. Secondary outcomes included %EBMIL at two years follow-up, nutritional deficiencies, CONUT score, incidence of associated comorbidities, major intraoperative complications and major 30-days postoperative complications.

Results

Four-hundred and sixty-nine patients were included: 114 underwent fOAGB and 355 underwent OAGB. There were no differences in major intraoperative complications or 30-days major postoperative complications. In the fOAGB group %EBMIL was significantly higher than in the OAGB group at 1 (93.5±27.9% vs 85.5±27.8%; p=0.030) and 2 years (97.4±27.5% vs 72.3±25.6%; p=0.0001). There were no differences in CONUT score and there was no case of severe malnutrition in either group. Endoscopic exploration of the duodenum was possible after fOAGB while necessitated surgery after OAGB in two cases.

Conclusions

fOAGB appears to yield superior weight loss outcomes compared to OAGB, while maintaining an acceptable safety profile. Prospective studies are needed to verify these results.

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SAFETY IN BARIATRIC-METABOLIC SURGERY: 16 YEARS OF BARIATRIC MEDICAL TOURISM, OUTCOMES FROM A LONGITUDINAL DATABASE

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Background

Mexico is an important medical tourism destination where thousands of bariatric-metabolic surgeries are performed every year. There is no official data of these bariatric procedures. The safety and outcome are unknown.

Objectives

The objective is to evaluate the safety and efficacy of the bariatric procedures performed in a certified institution in the Mexico-USA border in the last 16 years. Primary objective is to determine the morbidity and mortality and the secondary objective is to determine weight loss results and follow-up compliance.

Methods

16 years longitudinal database analysis (January 2005 to December 2021) including sleeve gastrectomy, Roux-en-Y gastric bypass, one anastomosis gastric bypass, adjustable gastric band, revisional surgeries and intragastric balloon performed at the Advanced Medicine Institute by one board certified bariatric surgeon. Only foreign (medical tourism) patients were included in our database.

Results

A total of 6178 consecutive patients were included -medical tourism patients- and 6263 bariatric procedures (1944 males, 4234 females). Mean age and body mass index were 35.3 years (range, 18-72) and 42.3 kg/m² (range, 31.3-88.6 kg/m²). Type of Procedures: Laparoscopic Sleeve Gastrectomy (LSG) 4446, Laparoscopic Roux-en-Y Gastric Bypass (LRNY-GBP) 361, Laparoscopic One Anastomosis Gastric Bypass (OAGB) 535, Laparoscopic Adjustable Gastric Band (LAGB) 401, Intragastric Balloon 333, Revisional surgeries 187. The 30-day complication rate was 3.7% (7) after Revisional Surgery, 0.8% (35) LSG, 2.4% (9) LRNY-GBP, 2% (11) OAGB, 7% (25) Intragastric Balloon. The highest weight loss at one year was observed after LRNY-GBP (50.6% EWL). The follow-up compliance rate at 2 years is lower if the patient lives more than 50 miles from the medical office. Only 13 (0.2%) patients required intervention in first 30-day PO. There were no 30-day mortalities, the discharge was at 1.5 day PO.

Conclusion

Medical tourism for bariatric-metabolic surgery is safe and effective when performed in a certified hospital and by a board-certified surgeon and multidisciplinary team.

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SAFETY OF LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS AND SLEEVE GASTRECTOMIES IN ELDERLY PATIENTS

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Background

While Bariatric Surgery is the most efficient treatment for obesity its utilisation in the elderly population remains limited. This study aims to compare the initial outcome of the two most common bariatric operations between patients older than 65 and younger patients.

Methods

A retrospective cohort analysis of patients who underwent primary laparoscopic Roux-en-Y gastric bypass (LRYGB) or laparoscopic sleeve gastrectomy (LSG) between March 2012 and December 2022. Patients older than 65 were compared with patients from younger age categories in terms of: comorbidities, 30 day complication, readmission and return to theatre rates.

Results

645 patients were included in this study and 31 patients were older than 65 (4.8%). Of these 31 patients 29% had a BMI greater than 50 (n9), 26% were diabetic (n8 $p<.001$), 68% underwent LRYGB (n21). There were no complications, return to theatre or readmissions within 30 days of surgery amongst the older age group. Only 10% of patients failed the next day discharge policy.

Conclusion

LRYGB and LSG seem to be safe bariatric surgery options for appropriately selected elderly patients. Further study and long-term analysis is required to establish long-term outcomes.

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SAFETY OF LAPAROSCOPIC SLEEVE GASTRECTOMY IN THALASSEMIC PATIENTS

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Background

The prevalence of obesity in thalassemic patients is less than healthy individual although metabolic syndrome and overweight still present in more than 10 percent of thalassemic patients in particular central obesity and dyslipidemia making them acceptable candidate for bariatric surgery.

Objective

To assess the safety of bariatric surgery on thalassemic patients.

Methods

This is a case series study includes 5 thalassemic patients treated by laparoscopic longitudinal sleeve gastrectomy LSG and the results, complications and 2 years follow up were recorded.

Results

Four cases enrolled in this study; their age 26-39 (32.7 ± 6.24) and their BMI 37.8-54.5 ($47.2 \pm 7.22 \text{ kg/m}^2$). Their excess weight 41-73 ($61 \pm 13.95 \text{ kg}$) and their preoperative hemoglobin 8.2-11.5 ($9.95 \pm 1.48 \text{ mg/dl}$). They lose 60-98.4 (77.3 ± 18.7 percent excess weight) and their new BMI 24.6-34.6 ($29.4 \pm 4.8 \text{ kg/m}^2$). One case has symptomatic cardiomyopathy which is improved after weight loss and two cases required blood transfusion (one case received 2 units and the other 1 unit). No mortality or life-threatening complications were recorded.

Conclusion

Although the series sample is small, but it shows that LSG is safe procedure for thalassemic patients with excellent results.

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SAME DAY DISCHARGE ROUX-EN-Y GASTRIC BYPASS AT A CANADIAN BARIATRIC CENTER: PATHWAY IMPLEMENTATION AND EARLY EXPERIENCES

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Bariatric surgery is widely accepted as an effective tool in the management of obesity. Early discharge protocols have been applied in bariatric surgery to standardize post-operative care, minimize inpatient resources, increase patient turnover, and maximize program capacities.

Same-day discharge (SDD) is the natural evolution of a successful early patient discharge initiative. Many bariatric centers across North America have adopted same-day sleeve gastrectomy discharge and some have now demonstrated the safety and feasibility of SDD for patients undergoing Roux-en-Y Gastric bypass (RYGB) surgery.

In this study, we illustrate the feasibility and implementation of SDD for RYGB at a high-volume bariatric center in Canada. Thirty-six patients were scheduled for SDD in our program, with 20 patients meeting our same-day discharge criteria while 16 patients were discharged after an overnight stay or later. No statistically significant difference in operative time or blood loss existed between the two groups. Patients who qualified for SDD received more Sugammadex (30% vs. 0%, $p=0.018$), required less surgical ward doses of hydromorphone (0.47 vs 1.16mg, $p=0.022$) and ondansetron (4.2 vs. 7.5mg, $p<0.001$) and received less ward IV fluids (mean 603cc vs. 1044cc, $p<0.001$). There were no 30-day complications. One 30-day ED visit occurred in the SDD group and one ED and one overnight admission in the $POD\geq 1$ group. All investigations and imaging were normal. Patients who did not qualify for SDD experienced residual post-operative pain, urinary retention, and apprehension about discharge. Further data is required to determine clinical safety. We continue to evolve our SDD pathway.

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SASI BYPASS AS A REVISION SURGERY FOR SLEEVE GASTRECTOMY NON RESPONDERS: 2 YEARS FOLLOW UP

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Introduction

Single Anastomosis Sleeve Ileal Bypass (SASI) is a Novel Metabolic/Bariatric Surgery operation based on Santoro's bipartition operation. It can be offered for patients with weight regain after Sleeve gastrectomy. Sleeve gastrectomy (SG) is a commonly performed bariatric procedure. Weight regain following SG is a significant issue. Yet, the understanding of this phenomenon is still unclear. Rates of regain ranged from 5.7% at 2 years to 75.6% at 6 years. SASI bypass was an option for some candidates having SG done 2 years back and failed to achieve the required weight loss or having weight regain. In SASI bypass, Resleeve gastrectomy of the dilated gastric pouch is done followed byplication of the stapler line then creating a Bipartition channel doing a side to side gastro-ileal anastomosis. The aim of this study is to report the clinical results and the outcomes of SASI bypass as a therapeutic option for patients with weight regain after SG.

Methods

We conducted a retrospective study for 75 morbidly obese patients having history of SG done more than 2 years back and failed to achieve and/or to maintain the required BMI. Procedure was done at Sidra Hospital in Kuwait from February 2017 to November 2021. Using 5 ports, Resleeve Gastrectomy was performed over 36 fr bougie tube starting 6 cm above the pylorus then gastro-ileal anastomosis (side to side) was performed 6 cm above the pyloric ring to an ileal loop counted 300 cm from the ileocaecal valve. Data was collected from the patients including: Weight loss progress, laboratory full results.

Discussion and Results

During the study period: 75 morbidly obese patients with a mean BMI of 44+/-6 Kg/m² were evaluated. %EWL (excess weight loss) reached 64% at two years-Diabetes was cured in the known diabetic patients (type2) within 6 months, Follow up laboratory results were normal in 88% of patients (all were kept on regular vitamins and proteins supplementation for 2 years). 3 patients had hiatal hernia that was repaired during the procedure and 2 patients had asymptomatic gall stones that was discovered during the routine preoperative work up for whom Laparoscopic cholecystectomy was done at same session before starting the SASI procedure.

Conclusion

SASI Bypass is a promising operation that offers a good weight loss for morbidly obese patients having weight regain after SG.

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SELF-FORMING MAGNETS FOR CREATION OF GASTROJEJUNAL COMPRESSION ANASTOMOSIS

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Background

A healthy, patent gastrojejunostomy is critical to many bariatric-metabolic surgeries. Anastomotic complications, including leaks, strictures, and bleeding, can lead to significant morbidity. A less invasive and minimally traumatic method for creating a gastrojejunostomy is ideal for a complication-free anastomosis. We present a preclinical study assessing gastrojejunal anastomosis creation using self-forming magnets (SFM) that can be delivered through an endoscope or a laparoscopic delivery tool (<5 mm diameter) to produce a large-diameter, foreign-body free anastomosis.

Objectives

Demonstrate in-vivo efficacy and safety of SFM compression anastomosis.

Methods

Gastrojejunal anastomosis creation was performed in 6 swine (35-40 kg) survived either 2 or 4 weeks. Under general anesthesia, laparoscopy was performed. In the first two animals, a gastric sleeve was created using linear staplers two weeks prior to a second laparoscopy for magnet implantation. The gastric SFM was delivered through an endoscope; the jejunal SFM was delivered through a 5mm enterotomy using a dedicated laparoscopic device. The SFM pair was laparoscopically coupled. All animals underwent surveillance endoscopy and contrast study under fluoroscopy on day 14 and immediately prior to euthanasia on day 28 to assess the side-to-side anastomosis.

Results

Gastrojejunal anastomosis creation was successful in 6/6 animals (100%). SFM was delivered, formed, and coupled in all cases (100%). 6/6 (100%) animals recovered and thrived following surgery. All coupled magnets were expelled by day 14. Endoscopic and contrast studies demonstrated a widely patent, leak-free anastomosis at days 14 and 28. By day 28, the anastomosis fully re-epithelialized and was barely perceptible on high-definition endoscopic visualization. Necropsy revealed no abscesses. Histologic examination of the anastomoses showed minimal to absent inflammation due to the absence of foreign material (unlike conventional sutures and staples).

Conclusion

This preclinical series suggests a large caliber, leak-free gastrojejunal anastomosis can be safely created using self-forming magnets delivered laparoscopically and/or endoscopically. Coupled magnets are spontaneously expelled following anastomosis formation. The anastomosis is widely patent and natural appearing due to a lack of foreign material. Self-forming magnets may allow for technically easier, minimally traumatic, and more reproducible gastrojejunal anastomoses in bariatric-metabolic surgery.



Figure 1. Self-Forming Magnets.

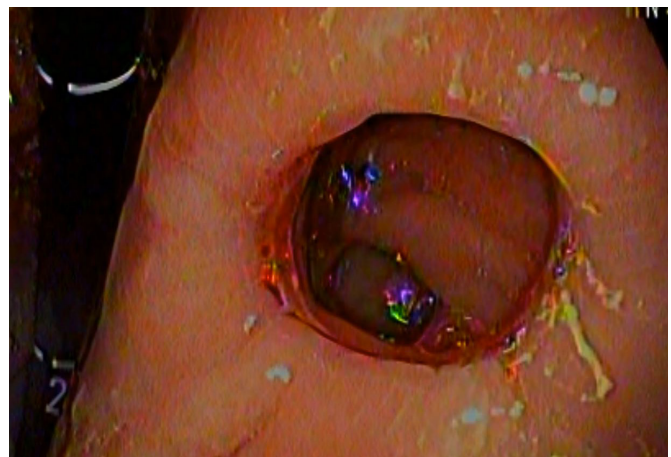


Figure 2. Endoscopy at 28 days.

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SEMAGLUTIDE AS AN ADJUNCT FOR WEIGHT LOSS AFTER BARIATRIC SURGERY

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Background

The effectiveness of GLP-1 agonists (GLP-1a) in the longer term management of type 2 diabetes, overweight and obesity has been described in several trials [1-9]. GLP-1a stimulate insulin release, suppress glucagon secretion, reduce gastric emptying and promote increased satiety without the risks of profound hypoglycaemia seen with other anti-diabetic medications [10]. Meta-analyses demonstrate a reduction in total body weight of 10-12.57% compared to placebo, a reduction in BMI and in waist circumference [11, 12]. Insufficient weight loss or weight regain is not uncommon following bariatric surgery [13] and GLP-1a may provide a benefit of further weight loss in these patients [14-16].

Objective

Describe outcomes in patients commenced on a GLP-1a (semaglutide) with refractory weight loss following bariatric surgery.

Methods

A retrospective analysis of weight loss outcomes from a single- centre cohort of post-operative bariatric patients was performed. Patients were identified and offered GLP-1a pharmacotherapy (subcutaneous semaglutide) if they had lost insufficient weight following bariatric surgery (partial responder), had lost insufficient weight with weight regain (partial responder + weight regain) or had lost sufficient weight but had experienced weight regain (weight regain). Patients were offered escalating doses depending on tolerance and dosing and weight loss were assessed at 3 monthly intervals.

Results

Pharmacotherapy was offered to 159 patients and 81.1% were female. The majority of patients underwent laparoscopic sleeve gastrectomy (51.6%). Partial responders, partial responders with weight gain and weight regain patients occurred in 20.1%, 15.1% and 64.8% respectively. Mean weight regain from surgery was 17.15kg and median pre-pharmacotherapy weight was 96.5kg (84.05, 112.55). Following semaglutide administration, mean weight loss was 8.6kg (median weight 89.2kg (75, 101.8)) and median change in BMI was -2.8kg/m^2 (-4.9- -1.5). Fifty percent of patients tolerated a maximum semaglutide dose of 1mg weekly (range 0.25-2mg). The most common side effects were nausea (16.4%) and change in bowel function (constipation (3.1%) and diarrhoea (3.1%)).

Conclusion

Semaglutide is an effective medical option in patients experiencing insufficient weight loss or weight regain following bariatric surgery. Patients need to be counselled about the potential side effects of semaglutide, that may effect tolerance.

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SERUM CTRP-1 LEVELS IN PATIENTS WITH OBESITY BEFORE AND AFTER BARIATRIC/METABOLIC SURGERY

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Introduction

Obesity is a chronic metabolic condition that poses a major risk for various health problems. It is linked with lower quality of life, reduced ability to work, and even death. When other methods fail, bariatric (metabolic) surgery is the most efficient option to manage severe obesity. CTRP-1 is an adipokine that is mainly produced by adipose tissue and macrophages stimulated by IL1 β and oxidized LDL macrophages, as well as from endothelial cells in atherosclerotic plaques.

Methods

We enrolled 27 individuals eligible for bariatric surgery (BMI \geq 40 kg/m² or BMI \geq 35 kg/m² with type 2 diabetes) and 26 healthy volunteers, whose weight was classified in the normal reference range. Anthropometric features, body weight changes, serum levels of CTRP-1 were assessed initially and 6 months after bariatric surgery (RYGB, sleeve gastrectomy, OAGB).

Results

Our study found significantly higher levels of CTRP-1 in individuals with obesity with/without carbohydrate disturbances before bariatric surgery compared to healthy controls. In addition, within the same group of patients, significantly lower levels of CTRP-1 were observed after metabolic surgery, which could be attributed to the reduction of visceral adipose tissue. These results are supported by the confirmed correlations between CTRP-1 and basic metabolic Rate (BMR) - Spearman's coefficient $\rho = -0.323$, $p = 0.021$ and the index of visceral fat from measurements performed via Bioelectrical Impedance analysis (BIA) - Spearman's coefficient $\rho = 0.367$, $p = 0.010$.

Conclusion

Levels of the adipokine CTRP-1 were significantly reduced in individuals 6 months after surgery-induced weight loss. This could enlighten a probable mechanism how bariatric surgery alleviate obesity-related complications and reduces cardiovascular risk. It could be used as a potential new therapeutic target for the treatment of obesity and its associated co-morbidities. Additional researches are necessary to confirm these results and give additional information on this topic.

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SEVERE OBESITY AND QUALITY OF LIFE: INTERDISCIPLINARY TEAM CHALLENGES IN PROMOTING PATIENTS CARE

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Background

Severe obesity and patients care management is a challenge for surgeons and also for the interdisciplinary team, associated to higher morbidity, mortality and weight loss failure in the long term.

Objectives

Identify the relationship between the bariatric metabolic surgery and the patient's general state of health and quality of life.

Methods

A retrospective analyses of patients undergoing bariatric metabolic surgery in the Brazilian Unified Health System, surgeries performed in 2022, was carried out. Social demographic data, Body Mass Index, pre-surgery comorbidities, post-surgery complications, comorbidities solution, treatment adherence, and impact on quality life perception were collected.

Results

Pearson's correlation test was applied with significance of ($p=0,05$). Participants were 27 patients who underwent Roux-en-Y Gastric Bypass (55.6%), sleeve gastrectomy (40.7%) and mini gastric bypass (3.7%). Average BMI before surgery was 57,3kg/m² and average age 37 years old. In most patients, surgically induced weight loss resolved comorbidities such as hypertension, diabetes mellitus, and sleep apnea within a period of 1 year. There is a positive correlation between a higher BMI index and after surgery complications ($r= 0.427$, $p= 0.026$) and a negative correlation between after surgery complications and quality of life perception ($r= -0.433$, $p= 0.024$), satisfaction with health ($r= -0.472$, $p= 0.013$) and daily activities performance ($r= -0.673$, $p= 0.000$). Medical treatment post-surgery was adopted by 85,2% of the patients, however none was being followed up by the entire interdisciplinary team (physician, nutritionist and psychologist). More than 80% of the patients are satisfied which indicates a positive correlation between quality of life and health satisfaction ($r= 0,619$, $p= 0,001$) and quality of life and satisfactory performance of daily activities ($r= 0,676$, $p= 0,000$).

Conclusion

The bariatric surgery results obtained in a Brazilian public health hospital in patients suffering from severe obesity point out a tendency in improving quality of life and life expectancy due to decreased comorbidities. Hence, health education strategies and a greater commitment between patients and the interdisciplinary team are necessary in order to guarantee that the results are maintained in the medium and long term.

Keywords: Bariatric Surgery; Obesity; Indicators of Quality of Life; Patient Care Team.

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SHORT-TERM OPERATIVE OUTCOMES AND SAFETY OF THREE-PORT LAPAROSCOPIC SLEEVE GASTRECTOMY IN 1,500 CASES

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Introduction

Laparoscopic sleeve gastrectomy (LSG) is a common bariatric surgery, traditionally performed with five ports. However, a modified technique using only three ports has been developed to reduce surgical trauma and improve cosmesis with safety.

Materials and Methods

Between December 2020 and February 2023, a single surgeon in one hospital performed 1,500 cases of three-port LSG. Operative outcomes were noted.

Results

The mean operative time was 50.60 minutes, with a mean blood loss of 10.33 ml. Mean length of stay following LSG was 3.1 days. There were no cases of conversion to open surgery. Five cases required the addition of a fourth port due to technical difficulty. Two cases had bleeding requiring reoperation, and four cases had leakage. Six cases had portomesenteric venous thrombosis, but no cases had surgical wound infection.

Conclusion

The three-port LSG technique is feasible and safe, and may be considered an alternative for patients seeking better cosmesis. However, it requires a high level of technical skill and experience.

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SHORT-TERM OUTCOME OF LAPAROSCOPIC SLEEVE GASTRECTOMY AND LAPAROSCOPIC SLEEVE GASTRECTOMY WITH PROXIMAL JEJUNAL BYPASS

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Objective

Metabolic surgery has been an option for type 2 diabetes and obesity. Among bariatric surgeries, metabolic effect of laparoscopic sleeve gastrectomy (LSG) is already well known. De Menzes first described LSG with proximal jejunal bypass (LSG-PJB) in 2004 as a supplementary procedure for LSG to limit absorption to enhance body weight loss. The metabolic effect of LSG-PJB was referred in many studies. Since, there is no published study for LSG-PJB in Korea yet, our center try to analyze it.

Method

This is a retrospective study to compare the outcomes between LSG and LSG-PJB. We enrolled patients who underwent bariatric and metabolic surgery at Keimyung University Dongsan Hospital from January 2019 to December 2021 and excluded patients who lost follow-up at six months. Metabolic index, intraoperative data and laboratory studies were collected and assessed at preoperatively and postoperative sixth month.

Results

We enrolled 153 patients, 78 for LSG and 75 for LSG-PJB. The mean age is 36.92 years old. Male is 46 (29.5%). 134 patients have at least one metabolic disease, and sixty patients have T2D. Patients with T2D tended to be received LSG-PJB with bypassing jejunum about 250cm to 300cm. There was one postoperative complication for LSG but 4 for LSG-PJB. Both groups decrease body weight significantly. However, excess BMI loss, total body weight loss, excess weight loss and change in BMI were not significantly different. Other metabolic parameters improved, still there were not statistically different. Moreover, there were no nutrition deficiencies in both groups.

Conclusion

LSG and LSG-PJB is a feasible, safe and effective surgery for treating obesity and diabetes. In sixth months short term data analysis, there were no statistically different in both group. A long term and randomized control study is still required, but LSG-PJB could be an option as an alternative operation method.

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SHORT-TERM OUTCOMES OF SLEEVE GASTRECTOMY WITH TRANSIT BIPARTITION A RETROSPECTIVE CASE-MATCHED STUDY WITH SLEEVE GASTRECTOMY FROM SINGLE CENTER OF CHINA

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Background

Sleeve gastrectomy plus transit-bipartition (SG-TB) is a potential bariatric procedure. However, the efficacy of SG-TB versus SG in Chinese patients has not been studied.

Objectives

To compare the short-term outcomes of SG-TB with SG and investigate the effectiveness and safety of SG-TB surgery in Chinese patients.

Methods

Patients underwent SG-TB or SG in our hospital from January 2019 to February 2022 were collected. Preoperative and postoperative assessments were weight loss outcomes, postoperative complications, comorbidities improvement and nutritional status.

Results

This retrospective study included 165 patients (SG-TB, N=87; SG, N=78) matched by age, gender, and BMI followed up for one year. One-year after surgery total weight loss (TWL) of SG-TB was roughly equal to that of SG (31.46±7.64% vs 32.37±8.46%, P=0.4945). In 92 patients (SG-TB, N=63; SG, N=29) with diabetes, the remission rate of diabetes was higher in the SG-TB group than in the SG group (88.89% vs 68.97%, P=0.0192). There was no statistical difference in postoperative GERD evaluation (GERD-Q score>8) between the SG-TB and SG groups (87.36% vs 76.92%, P=0.0788). The remission rates of hypertension were 83.33% vs 75.00% (P=0.5890), and hypertriglyceridemia were 93.93% vs 84.21% (P=0.1960). No patients suffered malnutrition postoperatively.

Conclusion

This matched retrospective study showed that SG-TB and SG were both efficient procedures. SG-TB showed better results compared to SG in the remission of diabetes. Based on our study, SG-TB is an effective and safe bariatric procedure for Chinese patients. However, further investigations are needed.

Table 1. Comparison of preoperative and postoperative (one-year after surgery) assessments of patients.

	Preoperative		P	Postoperative		P
	SG-TB	SG		SG-TB	SG	
Age (years)	34.2±6.80	32.47±8.59				0.1638
Male/female	24/63	23/55				0.7871
BMI (kg/m ²)	38.98±5.47	40.69±6.66	0.1256	26.60±3.97	27.31±4.58	0.3635
%TWL				31.46±7.64	32.37±8.46	0.4945
FPG (mmol/L)	8.88±3.05	6.96±2.93	0.0040	5.13±0.68	4.85±1.02	0.1796
HbA1c (%)	8.51±1.82	6.69±1.75	0.0000	5.24±0.86	5.44±0.52	0.4459
Remission rate of T2DM (%)				88.89	68.97	0.0192

Data are shown as mean ± S.D. BMI, body mass index; %TWL, total weight loss; FPG, fasting plasma glucose; HbA1c, glycosylated hemoglobin; T2DM, diabetes mellitus type 2.

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SHORT-TERM WEIGHT LOSS OUTCOMES OF CONVERSION TO SLEEVE GASTRECTOMY AFTER FAILED ADJUSTABLE GASTRIC BANDING

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Background

The practice of adjustable gastric banding (AGB) has been on the decline due to suboptimal weight loss outcomes and high rate of revisional surgery. Although both sleeve gastrectomy (SG) and Roux-en-Y gastric bypass (RYGB) have been considered a feasible option, there has been debate about the expected efficacy of SG as a revisional procedure after AGB as both procedures are considered solely restrictive procedures.

Objectives

The aim of this study is to compare the short term weight loss outcomes of revision SG to that of revision Roux-en-Y gastric bypass (RYGB) after failed AGB.

Methods

A retrospective review of the medical records of patients who had received revisional SG (rSG) and revisional RYGB (rRYGB) after failed AGB at our institute from 2019 to 2022 was done. Patient characteristics, perioperative outcomes including operation time and postoperative hospital stay, and weight loss outcomes were collected.

Results

The medical records of a total of 64 patients were included. The rSG group included 16 patients and the rRYGB group 47 patients. The preoperative BMI was 38.8 ± 7.15 kg/m² in the rRYGB group and 36.6 ± 3.14 kg/m² in the rSG group. The TWL at 6 months was 20.8 % in the rRYGB group vs. 19.8% in the rSG group ($p = 0.897$). The TWL at final follow up was 25.1 % in the rRYGB group vs. 21.3 % in the rSG group ($p = 0.845$). The median follow up was 17.3 ± 9.1 months and 19.6 ± 10.8 months respectively ($p = 0.141$). There were no significant differences in operative time ($p = 0.455$), postoperative hospital stay and postoperative complications.

Conclusion

The short-term weight loss and perioperative outcomes of rSG and rRYGB after failed AGB were comparable. Revisional SG can be considered a valid option after failed AGB.

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SIGNIFICANCE OF STAPLE LINE REINFORCEMENT AND GASTRIC SLEEVE FIXATION IN LAPAROSCOPIC SLEEVE GASTRECTOMY

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Background

Nowadays, laparoscopic sleeve gastrectomy (LSG) is the main procedure of bariatric surgery worldwide. Moreover, over 90 % of the bariatric surgery are LSG in Japan, because it is the only procedure covered by national insurance. Various techniques have been reported to reduce postoperative complications after LSG such as reinforcement or fixation, but no consensus has yet been reached. Several meta-analyses have reported that staple line reinforcement (SLR) reduces the risk of postoperative bleeding and leakage regardless of the techniques. Different techniques for SLR have been conducted with complete or partial suture of the staple line, the use of buttress materials, sutures with omentum or the application of fibrin glue. However, the outcomes among these techniques varies in the literature and remains controversial. On the other hand, the effectiveness of gastric sleeve fixation (GSF) has been proven in a number of RCTs, and the other studies have shown that it reduces postoperative gastric sleeve distortion, stenosis, and leakage.

Objectives and Methods

In this report, we describe our techniques of SLR and GSF in LSG.

Results (Surgical techniques)

In our procedure, we cut the stomach with linear stapler without buttress materials, then continuous seromuscular sutures with non-absorbable thread is put on staple line as a reinforcement. In particular, the angle of His should be securely buried since it is a common site of leakage. We have been used this technique since its introduction, because we believe that full suture of the staple line is supposed to prevent not only leakage, bleeding, and adhesions, but also kinking and twisting of the gastric sleeve. For GSF, 3-4 stitches are sutured with the distal part of the gastric sleeve and the anterior lobe of the transverse colon mesentery using non-absorbable thread. It is important to keep the gastric sleeve straight, and it is also important to avoid the gastric sleeve from flip-up and kinking.

Conclusion

Our procedure of SLR and GSF is safe and effective to reduce complication after LSG, we continue to accumulate the cases to make solid evidence.

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SIGNIFICANT FIBROSIS ASSESSED BY LIVER BIOPSY AMONG CHINESE BARIATRIC SURGERY PATIENTS: A PROSPECTIVE CROSS-SECTIONAL STUDY

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Background

Fibrosis stages affect clinical prognoses related to nonalcoholic fatty liver disease (NAFLD). However, data on the prevalence and clinical features of significant fibrosis are scarce in Chinese bariatric surgery patients. We aimed to investigate the prevalence of significant fibrosis in bariatric surgery patients and to identify its predictors.

Methods

We prospectively enrolled the patients performing intra-operative liver biopsies during bariatric surgery from a bariatric surgery center in a university hospital between May 2020 and January 2022. Anthropometric characteristics, co-morbidities, laboratory data and pathology reports were collected and analyzed. The performance of non-invasive models was evaluated.

Results

Of 373 patients, 68.9% had non-alcoholic steatohepatitis (NASH) and 60.9% exhibited fibrosis. Significant fibrosis was present in 9.1% of patients, advanced fibrosis in 4.0%, and cirrhosis in 1.6%. Multivariate logistic regression showed that increasing age (odds ratio [OR], 1.06; p=0.003), presence of diabetes (OR, 2.62; p=0.019), elevated c-peptide (OR, 1.26; p=0.025) and elevated aspartate aminotransferase (AST) (OR, 1.02; p=0.004) were independent predictors of significant fibrosis. The non-invasive models, AST to Platelet ratio (APRI), Fibrosis-4 (FIB-4), and Hepamet fibrosis scores (HFS) provided greater accuracy for predicting significant fibrosis, compared to the NAFLD Fibrosis Score (NFS) and BARD score.

Conclusion

More than two-thirds of bariatric surgery patients had NASH and the prevalence of significant fibrosis was high. Elevated levels of AST and c-peptide, advanced age and diabetes indicated a higher risk of significant fibrosis. Non-invasive models, APRI, FIB-4 and HFS can be used to identify significant liver fibrosis in bariatric surgery patients.

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SIMULTANEOUS GASTROPEXY WITH OR WITHOUT HIATOPPLASTY ASSOCIATED TO LAPAROSCOPIC SLEEVE GASTRECTOMY ENSURES AN EFFECTIVE PROTECTION AGAINST GASTROESOPHAGEAL REFLUX SYMPTOMS

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Background

Gastroesophageal reflux (GERD) symptoms occur quite frequently in people with obesity and might be also associated with hiatal hernia. The GERD symptoms had to be taken into consideration before a laproscopic gastric sleeve (LGS) procedure an adressed during surgery since one of the postoperative complications, the intrathoracic sleeve migration, might aggravate those symptoms with significant alteration of the postoperative life quality.

Objectives

The present study aimed to retrospectively evaluate the efficiency of the LSG associated with gastropexy with or without hiatoplasty in patients with preoperative GERD symptoms.

Methods

During the last 3 years, 26 patients revealed GERD symptoms prior a LGS procedure for BMI over 32. The preoperative endoscopy retrieved small associated hiatal hernias (HH) in 12 patients while 7 of them had also a Los Angeles Class A esophagitis. All patients underwent for at least two weeks a preoperative treatment with proton pump inhibitors (PPI). During LSG a HH was identified in 14 patients (2 more than those identified at endoscopy), with a mean hiatal defect of 2cm in diameter. In patients with HH appart the LSG a hiatoplasty was performed with nonabsorbable sutures and in all 26 patients with preoperative GERD symptoms, a gastropexy was associated.

Results

The postoperative course was uneventful. The mean postoperative follow up was 14.8 months. At 6 monhs after LSG the mean percentage of the total weight loss in the 26 patients was 34.6, while none of them encontered postoperative GERD symptoms. One year later, 8 patients (30.7%) had GERD symptoms but no esophagitis was found at endoscopy and medical treatment was recommended (PPI). Twelve patients underwent a two year paostoperative control with 6 of them presenting GERD symptoms while 3 of them had an associated esophagitis at endoscopy with good response to PPI.

Conclusion

Hiatoplasty, when needed, and gastropexy seemed to represent protective factors for the development or a recurrent GERD after LSG. However, due to the scarce number of patients included in the present study we think that large cohort studies should be conducted to evaluate the efficiency of these surgical gestures in preventing the post LSG GERD .

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SINGLE ANASTOMOSIS ILEAL BYPASS, ONE ANASTOMOSIS GASTRIC BYPASS, SLEEVE GASTRECTOMY OUTCOME FOLLOWED BY SIX MONTHS

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Background

Because of the diet with westernization, obesity rates are more and higher in Taiwan. As a result, the number of bariatric surgeries also increased year by year. Many types of bariatric surgery procedures have developed with the development of medical treatments. Roux-en-Y gastric bypass (RYGB) to sleeve gastrectomy (LSG) was a mainstream bariatric surgery procedure. Recently, one anastomosis gastric bypass (OAGB) and Single anastomosis duodenal-ileal bypass with sleeve gastrectomy (SADI-S) were recognized as one bariatric surgery procedures by the International Federation for the Surgery of OBESITY (IFSO). Despite many bariatric surgery procedures, postoperative them still produce some complications. Therefore, bariatric surgery procedures have continuously improved, and “Single anastomosis sleeve ileal bypass” (SASI) has been a novel bariatric surgery procedure recently.

Objectives

Short-term compared to the outcome of three procedures, LSG, OAGB, and SASI followed by six months.

Methods

SASI was 40% biliopancreatic limb bypass, and OAGB was 30%. We used EXCEL and IBM SPSS version 26.0 analysis data. Retrospectively collected data followed by six months in E-DA hospital and compared to three procedures 32≤BMI<50 with obese patients, including preoperative baseline data percentage of total weight loss (TWL%) and nutrient biochemistry test data.

Results

Total cases were 425. The 90 cases were primary SASI, 135 were primary OAGB, and 200 were primary LSG. Compared to TWL% of three procedures after one-month, three-month, and six-month p-value were not significant (P-Value: 0.415, 0.148, 0.274), and TWL% after six-month seemed to be better with LSG (LSG: 11.3% vs. OAGB: 21.0% vs. SASI: 27.5%). To better HbA1c improvement was OAGB. However, the nutrient biochemistry test and data show that SASI seemed to have more nutritional deficiency than OAGB.

Conclusion

The study compared the outcome of SASI, OAGB, and LSG, and TWL% after six-month seemed to be better with LSG. However, it also depends on the persistence of weight loss after the three procedures. Besides, because SASI bypassed the biliopancreatic limb longer than OAGB, it was able to nutritional deficiency. Long-term follow-up was necessary, we thought SASI was one of the novel bariatric surgery procedures in the future.

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SINGLE CENTER EXPERIENCE WITH INTRA THORACIC SLEEVE MIGRATION ITSM

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Background

Obesity is epidemic all over the world and laparoscopic sleeve gastrectomy LSG is the most common bariatric procedure performed; intra thoracic sleeve migration ITSM is an underestimated complication ITSM that needs further studies.

Objective

To assess the incidence and presentation of ITSM and the best method of treatment.

Methods

Among 1650 patients who had LSG between October 2011 till February 2023 in our center 8 cases were diagnosed with ITSM and treated accordingly the preoperative assessment and operative videos were re-checked and data analyzed.

Results

8 cases were diagnosed with ITSM they are 7 females and 1 male their age 43.1 ± 7.8 years and their BMI 50 ± 4.6 kg/m²; the time of presentation 5.25 ± 6.7 months. The commonest presentation was persistent GERD in 7 of them (87.5%) followed by Nausea and vomiting in 6 patients (75%) while 4 patients had epigastric pain (50%) and dysphagia in 3 patients (37.5%). Six cases treated by laparoscopic re position of the stomach with cruroplasty and gastropexy; 2 cases treated by OAGB after re position of the stomach; 2 cases treated by Roux -en-Y Gastric Bypass (RYGB) 1 after failed OAGB and 1 after failed cruroplasty.

Conclusion

In spite of little number of recorded cases repositioning of stomach with cruroplasty which is relatively simple procedure had good success rate (83.3%) while Roux-en-Y 1 is definite procedure that can be spared as a final choice.

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SINGLE VS DOUBLE LAYER FOR GASTRO-JEJUNAL ENTEROTOMY CLOSURE DURING OAGB, A MULTICENTER RETROSPECTIVE NON INFERIORITY STUDY

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Background

Laparoscopic One Anastomosis Gastric Bypass (OAGB) is an effective weight loss procedure, with a worldwide raising number of procedures during the last years. despite the large number of procedures there is a lack of evidence about the correct closure of the gastro jejunal anastomosis that could be closed with a single or double layer. No studies have compared these variants in terms of efficacy and complications.

Objectives

Evaluate if single layer is safe and effective in terms of short terms complications rate during enterotomy closure of gastro jejunal anastomosis during OAGB.

Methods

We retrospective analyze prospective collected data of all consecutive patients which undergoing OAGB in two different obesity centers between January 2019 and December 2021. All consecutive OAGB were included in the papers. The patients enrolled present a BMI>35 with at least one comorbidity and all patients with a BMI>40. Data collected included biometric features, intra operative data and post-operative data, at least 1 year follow-up data were recorded. The statistical analysis was carried out using IBM SPSS Statistics 25. Continuous data were expressed as mean \pm standard deviation (SD). To compare continuous variables, an independent sample T test was performed. The χ^2 test was employed to analyze categorical data. Logistic regression was performed to understand if some factors could influence operative time or length of stay. Regarding nonparametric variables (such as time to flatus and length of stay), we used a Mann–Whitney U test. All the results are presented in this study as 2-tailed values with statistical significance if the p values were below 0.05.

Results

A total of 221 patients has been evaluated, (137 in single layer group and 84 in double layer group). The groups were homogenous in biometric features. Only one positive blue test for each group has been found. In both groups we found a Clavien Dindo 3a post-operative complication. No post operative leaks have been found in both groups. At 1 year follow up in both group no stricture or marginal ulcer has been recorded.

Conclusion

This study demonstrates a non-inferiority of single layer enterotomy closure during OAGB.

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SLEEVE GASTRECTOMY DOES NOT IMPROVE SKIN-AUTOFLUORESCENCE VALUES 12-36 MONTHS AFTER SURGERY

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Background and Aim

Obesity is associated with hyperglycemia and oxidative stress, which may lead to an increased production of advanced glycation end products (AGEs). Sleeve gastrectomy (SG) has been shown to improve obesity and glucose metabolism. Skin-autofluorescence (SAF) is a non-invasive marker for subcutaneous AGEs accumulation, correlated to cardiovascular risk. The aim of the study was to investigate SAF variations in patients with obesity 12, 24 and 36 months after SG.

Methods

SAF values (expressed in “arbitrary units”, AU) were measured through AGE Reader (Diagnoptics B.V.) in 110 subjects with class II or III obesity before (T0) and 12 (T12), 24 (T24) and 36 (T36) months after SG. Values were compared to age-stratified reference values.

Results

The mean basal SAF was 2.40 ± 0.59 , and 47% of the subjects showed basal SAF values above reference values. These correlated positively with age ($r=0.48$, $p<0.01$) but not with body mass index (BMI), gender or presence of diabetes. No significant differences in mean SAF values were found either in the analyzed subgroups at T0 (normal vs. abnormal basal SAF levels, male vs. female, diabetes vs. normoglycemia, % excess weight loss $>50\%$ vs. $<50\%$), nor in the total population (T12: 2.41 ± 0.57 ; T24: 2.41 ± 0.64 ; T36: 2.43 ± 0.71 ; $p=0.95$). But, considering individual SAF changes, only the patients who increased SAF levels at T36 (43% of the population), showed a significant difference between SAF measurements.

Discussion

Almost half of the subjects with class II and III obesity showed abnormal basal SAF values. Mean SAF did not change 12-36 months after SG, but individual SAF levels were significantly increased at 36 months in 43% of the patients. This could be due to the weight loss itself, which seems to release AGEs accumulated in the adipose tissue, but also to the postoperative diet: with high amounts of protein-rich foods and low in vegetables (for volumetric reasons). This could lead to an increased dietary AGEs intake and a decreased intake of antioxidants and antiglycation phytocompounds. Furthermore, as the half-life of collagen is about 15 years, the observation period might be too short for an improvements in SAF.

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SLEEVE GASTRECTOMY IN PERITONEAL DIALYSIS PATIENTS: A FEASIBLE OPTION

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Background

Sleeve gastrectomy (SG) is the most performed bariatric surgical procedure worldwide. However, SG in peritoneal dialysis (PD) patients is uncommon and poses unique challenges due to the presence of the PD catheter and the importance of maintaining the integrity of the peritoneum to avoid compromising the dialytic procedure.

Objectives

This study reports the outcomes of SG in two patients undergoing PD for end-stage renal disease (ESRD). The primary objective is to report the safety and feasibility of SG in PD patients, and the secondary objective is to document our strategy for peritoneum closure in this specific patient population.

Methods

Two patients with ESRD on PD who underwent SG were included in this retrospective case report. The closure technical procedure was documented.

Results

After literature review and discussion with the Nephrology team, both patients underwent SG without any major perioperative complications or infections related to the PD catheter. To ensure proficiency of peritoneal dialysis after surgery, all surgical ports were closed using a *Riverdan* needle with excellent results. Patients reported no problems with PD after the procedure.

Conclusion

SG can be safely performed in carefully selected PD patients with obesity and metabolic disorders. PD-related complications and infections remain a concern, but careful perioperative management can minimize the risk of these complications. The use of a *Riverdan* needle for peritoneum closure in this patient population is a feasible and safe technique.

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SLEEVE GASTRECTOMY WITH HORIZONTAL GASTROPLASTY: A NOVEL PROPOSAL FOR SLEEVE ASSOCIATED GASTRO-ESOPHAGEAL REFLUX

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Background

Gastric sleeve is the most common bariatric procedure worldwide and its prevalence has been ever increasing since its inception in 2005. One of the major concerns for bariatric surgeons is the development or increased severity of gastro-esophageal reflux disease. In the last few years several “improvements” to sleeve gastrectomy have been proposed, in order to decrease the risk or severity of post-sleeve reflux disease. Some of these techniques propose the creation of a fundoplication (posterior - Nissen-Sleeve, or anterior - Sleeve-Dor) claiming good results for the control of gastric reflux. These techniques have a more significant learning curve, have some reported complications and keeps part of the gastric fundus, which is thought to be important for weight loss. We propose a technique of a “Belsey-type” horizontal gastroplasty after sleeve resection with bilateral horizontal mattress sutures to perform an horizontal valve.

Case Report

We present the video-report of a 28 year-old female with a BMI of 41.5. She had a small hiatal hernia with a grade B esophagitis. She had no other medical co-morbidities and was highly motivated for sleeve gastrectomy. After multidisciplinary consultation she was proposed for a day-surgery Sleeve Gastrectomy with an horizontal gastroplasty (Sleeve-Belsey) and hiatoplasty. Three months after surgery the patient has lost 20% of TW and has no symptoms of gastroesophageal reflux.

Conclusion

Associating an horizontal gastroplasty to a sleeve gastrectomy is a simple procedure that might improve sleeve associated gastroesophageal reflux although further studies are required in order to validate this technique.

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SLEEVE GASTRECTOMY WITH ONE ANASTOMOSIS BIPARTITION (SG+OAB) VERSUS ONE ANASTOMOSIS GASTRIC BYPASS (OAGB): A PILOT STUDY

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Background

One anastomosis gastric bypass (OAGB) is a new recognized metabolic surgery, but the problem that we cannot screen the excluded stomach is a troubling issue in China. The emergence of sleeve gastrectomy plus one anastomosis bipartition (SG+OAB) makes us see a hope to solve this problem.

Objectives

By comparing the efficacy of the two surgical methods, to evaluate whether SG+OAB surgery can solve the dilemma faced by OAGB that the excluded stomach cannot be screened.

Methods

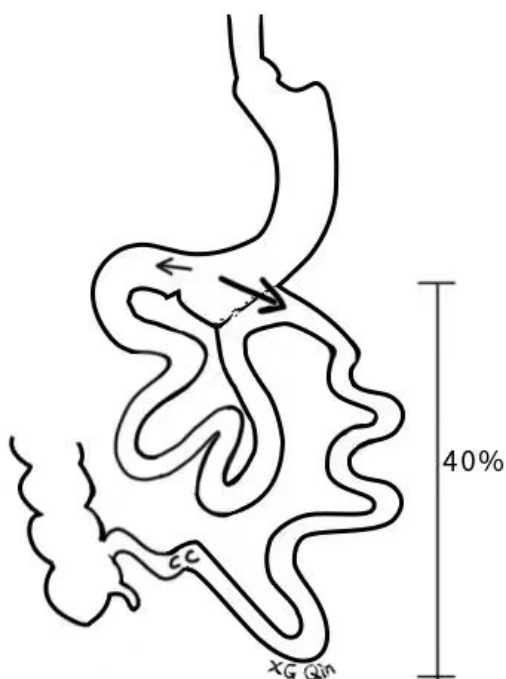
A Retrospective study to compare the patients who underwent OAGB and SG+OAB was conducted. The main outcome measures were (1) operation risk (2) weight loss (3) diabetes remission at 6 months.

Results

The study was conducted in the bariatric/metabolic surgical center. From November 2021 to February 2022, a total of 30 patients with obesity received SG+OAB surgery were recruited. Another matched 60 patients undergoing OAGB were recruited a control group. There was no difference in preoperative age (32.15 ± 9.02 vs. 34.47 ± 7.22 ; $p=0.224$), female ratio (83% vs. 85%; $p=0.837$) and BMI (36.18 ± 5.30 vs. 34.68 ± 5.58 ; $p=0.217$) between the two groups. OAGB had a shorter mean operation time (121.67 ± 20.41 vs. $143.50.94 \pm 25.07$ minutes; $p < 0.001$) and a lower intraoperative blood loss (21.92 ± 12.35 vs. 32.43 ± 22.01 ml; $p=0.005$), but a longer postoperative flatus passage (2.13 ± 0.43 vs. 1.87 ± 0.43 days; $p=0.007$) compared with the SG+OAB group. Two patients (6.7%) developed major surgical complication in SG+OAB group but no major complication developed in OAGB group. At 6 months after surgery, SG+OAB had a higher %total weight loss than OAGB (31.05 ± 3.12 vs. 28.14 ± 5.43 %; $p=0.015$), but diabetes remission rate was similarly high in both groups.

Conclusions

SG+OAB operation had a non-inferior or even better weight loss than OAGB, with a similar glycemic control efficacy. However, the high complication rate of SG+OAB is the major drawback that needs attention.



Upper gastrointestinal series showing the SG+OAB technique.



This SG+OAB image shows that most of the contrast medium enters the ileum, and a small part enters the duodenum.

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SLEEVE GASTRECTOMY: IS THIS BARIATRIC SURGERY ENOUGH TO IMPROVE DIABETES? 5 YEARS FOLLOW-UP

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Background

Many studies have demonstrated the effectiveness of sleeve gastrectomy as a weight loss surgery, due to it is a restrictive procedure, and also a benefit in glucemic control.

Objectives

The aim of this study was to evaluate the long-term effects of laparoscopic sleeve gastrectomy on severe obese patients with type 2 diabetes mellitus (DM)

Methods

Sixty four severe obese diabetic patients weighth 130.87 ± 17.4 kg and body mass index (BMI) 47.3 ± 7.2 kg/m² (20 with BMI > 50 kg/m²) underwent primary laparoscopy sleeve gastrectomy (LSG). A 34 French blunt-tipped tube was used to calibrate the sleeve before stapling. A total of 38 woman and 26 man aged 46.5 ± 7.8 years were follow-up between 2007 and 2016. Before the surgier, 50 patients were taken 1 antidiabetic oral drug to control their DM and 14 were taken 2. None of them needed insuline. All patients had a 60-month follow-up.

Results

At discharge, all of the patients discontinued antidiabetic medications. Fifty eight patients (90,62%) continued also without drugs 6 months after sleeve gastrectomy (mean BMI of 43.8 ± 5.5 kg/m²). At 5 years of follow-up, the mean of percentage of excess weight loss (%EWL) was $65,9 \pm 9,4\%$. At 60 months, 51 of 64 LSG patients (79,68%) had normal fasting plasma glucose (FPG $90,5 \pm 16,4$) and HbA1c values without antidiabetic therapy. No new cardiovascular event or diabetic retinopathy or nephropathy occurred during the whole period of observation.

Conclusion

The results of this study shows and confirms the efficacy of sleeve gastrectomy in the treatment of diabetes mellitus. This long follow-up (60 months) indicates that LSG can benefit a considerable percentage severe obese diabetic patient mantaining prolonged remission of DM.

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SLEEVE-DOR ANTERIOR FUNDOPLICATION FOR OBESITY: ROBOTIC AND LAPAROSCOPIC TECHNICAL ASPECTS FOR PATIENTS WITH PREVIOUSLY SYMPTOMATIC REFLUX

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Background

Symptomatic gastroesophageal reflux is considered a relative contraindication to perform sleeve gastrectomy for obesity, due to known worsening of symptoms and resulting in later revision to gastric bypass in a significant amount of patients. Current alternatives as associate 360o Fundoplication can potentially produce severe complications and inadequate weight loss due to large amount of stomach left.

Objectives

The present study evaluates the possibility of performing an anti-reflux anterior DOR Fundoplication combined with sleeve gastrectomy to treat patients with obesity and preexistent reflux disease.

Methods

In this prospective study, 79 patients with indication for sleeve gastrectomy with endoscopically and clinical reflux disease with esophagitis signed informed consent and were submitted to the technique. Four trocars were used. After sealing the greater curvature, the hiatus was systematically dissected and the right crus was identified. Sleeve gastrectomy was performed from 3cm from pylorus, leaving an “ear” of 3 cm at the fundic region. An anterior 180o Fundoplication was performed with barbed non-absorbable sutures over a 36Fr Gauge. Blue methylene anastomotic test was performed, and no drainage was used.

Results

In total, 79 procedures were included, 7 hiatal hernia were found intraoperatively. Mean age was 48.3 years. Preoperative mean BMI was 52.4kg/m². Within 30 days postop, few complications could be identified. One patient died of pulmonary embolism 18 days after surgery. In the 6 months follow-up, three patients have no relief from reflux symptoms and a conversion to RYGB was performed. The other patients were free of medication after 60 days.

Conclusion

In this population with obesity with surgical indication, the use of the SLEEVE-DOR Technique is a potential alternative for patients with obesity and previous severe reflux with indication for Sleeve gastrectomy.

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SOCIAL PERCEPTION, OBESITY AND BARIATRIC SURGERY: A PRELIMINARY STUDY

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Background

Social perception is the ability to read selected social cues in order to make judgements about the behaviour, attitudes and emotions of others¹. Bellack and Morrison have proposed a model of social skills composed of 3 basic characteristics: expressive, receptive, and interactive balance².

Objective

Many studies investigated the social cognitive impairment in patients with obesity. Few data exist about the relationship between social perception³ and alexithymia⁴ related to poor outcome after bariatric surgery. The aims of this study are assessing: 1) whether social perception is lower in patients with obesity than normal control⁵; 2) whether social perception is related to alexithymia, thus contributing to poor outcome after bariatric surgery.

Methods

33 subjects seeking bariatric surgery (mean age 37.63±9.1 years; 20 females; average BMI 41.83 kg/m²) were enrolled in the study. At the pre-operative assessment, they underwent psychiatric examination to exclude severe mental disorders and a semi-structured interview to detect their eating behaviours. Psychometric evaluation was performed with: *The Awareness of Social Inference Test* (TASIT-A) to evaluate social inference, Barratt Impulsivity Scale (BIS) for impulsivity and Toronto Alexithymia Scale (TAS-20) for alexithymia.

Results

Eating behaviours detected were: gorging (16, 48.48%), grazing (7, 21.21%), nocturnal eating (2, 6.06%), binge (6, 18.18%) and sweeteating (1, 3%). Results of TASIT-2 pointed out that the sample shows lower scores than the average of the general population (Figure 1). There was no statistically significant correlation with BIS and TAS scores. These results do not appear to be related to BMI or to the different type of eating behaviour.

Conclusions

This preliminary study emphasized the poorer social perception skills in patients with obesity seeking bariatric surgery than the average of the general population. In this sample, social perception skills are not related to alexithymia that is a well-known factor of poor outcome after bariatric surgery. Larger samples could better identify the psychological dimensions related to social perception in patients with obesity.

TASIT sections	Our sample mean(ds)	General Population mean(ds)	p
The Emotion Evaluation Test (EET)	22,39(3,61) N=33	24,86(2,11) N=88	<.01*
The Social Inference–Minimal (SI-M) test	44,76(6,49) N=33	54,11(4,29) N=98	<.01*
The Social Inference–Enriched test (SI-E)	47,76(4,84) N=33	55,64(4,82) N=123	<.01*

Figure 1. * significant difference between our sample and general population groups according to independent sample t-test.

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SPONTANEOUS SPLENIC RUPTURE TWO WEEKS AFTER SLEEVE GASTRECTOMY

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Introduction

Sleeve gastrectomy is one of the commonest bariatric procedures performed globally with an acceptable rate of reported complications. Splenic injury during this procedure is a rare but can be a serious complication.

Aim of the study

To highlight about this potential complication for surgeons to be aware about timely management to avoid fatal complications.

Methods

A 32-year-old male patient who had a spontaneous splenic rupture two weeks after an uneventful sleeve gastrectomy needed an emergency splenectomy. Spontaneous rupture after sleeve gastrectomy is an extremely rare condition with one single previous report

Results

Diagnosis needs a high clinical suspicion and treatment is usually by splenectomy if not responding to resuscitative measures. Such cases need adequate further workup to exclude other causes of rupture.

Conclusion

Considering the high number of sleeve gastrectomy procedures done worldwide, this report highlights the importance of high suspicion and awareness of physicians who face patients with post-bariatric complications. Early diagnosis and intervention are usually important factors in better outcome.

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STANDARDISATION LEADS TO EXCELLENT RESULTS IN PRIMARY LAPAROSCOPIC SLEEVE GASTRECTOMY (LSG) WITHOUT STAPLE LINE REINFORCEMENT- RESULTS OF 864 CONSECUTIVE CASES

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Background

LSG is the most popular bariatric procedure worldwide. There is evidence of modest benefit of staple line reinforcement on bleeding and leak rates, however, this is at considerable cost. Standardisation of technique in primary LSG could result in lower rate of complications, as has been shown in primary roux en y gastric bypass.

Objectives

To assess outcomes following primary LSG under a standardised protocol.

Methods

A prospectively maintained database was analysed to identify all patients undergoing primary LSG under a single surgeon, between July 2010 and January 2023. Perioperative complication was within 30 days of index procedure. A standardised protocol was adopted for operative and post-operative management. Enhanced recovery principles were followed and discharge planned at day 2.

Results

864 primary LSG procedures were performed. Mean age was 41.6 ± 10.6 years, range 19-70 years. Mean BMI was 45.5 ± 7 kg/m², range 33.2-84.7 kg/m². The majority were female (F:M 757:107). 22 complications were identified in 20 patients (2.31%). Ten (1.16%) were major complications (Clavien Dindo >3b) requiring return to theatre, including six cases of haemorrhage (0.69%), two negative laparoscopies (0.23%), one thermal injury gastric leak (0.12%) and one staple line leak (0.12%). There were 8 readmissions (0.93%) and no deaths in the perioperative period until discharge.

Conclusion

Standardisation of operative and post-operative protocol in primary LSG leads to excellent early outcomes and low rates of complication, 30-day readmission and zero mortality. This may have a greater effect on reducing complications, in a more cost-effective way than staple line reinforcement (SLR).

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STANDARDIZING REFERRAL REQUIREMENTS AND EDUCATION BEFORE SURGEON ASSESSMENT ENSURES PATIENTS ARE APPROPRIATELY SELECTED, INFORMED AND MOTIVATED FOR BARIATRIC SURGERY

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Background

In resource limited bariatric surgery services, clinic assessment for patients who do not proceed to surgery is best avoided. Assessment of ineligible patients or those lacking sufficient understanding of or motivation for surgery uses resources better applied to those who will proceed to surgery. Our service instituted standardised referral requirements in March 2018 to allow safe and adequate assessment of all patients under evaluation for bariatric and metabolic surgery. This includes surgical and anaesthetic risk screening, group education replicating that which is done during an initial surgical consultation and a patient driven, at home, Health Information and Weight Management program (HIWMP) to provide further education and opportunities for screening prior to individual surgeon assessment. The HIWMP has modules focused on surgical, nursing, dietitian, and psychological interventions essential to optimise patients' outcomes following bariatric and metabolic surgery. Patients must first attend the group education session to be offered participation in HIWMP. Should either or both steps not be completed, the patient is discharged from the service not proceeding to surgery. We assessed impact of a standardized assessment and education pathway prior to clinic attendance on patient progression to surgery.

Methods

We conducted a single center retrospective analysis of all routine referrals processed between 2021-2022. Patient referrals processed outside the standardized pathway were excluded from this analysis.

Results

During this period 632 complete referrals were received. One-ninety-two (30.4%) were deemed inappropriate for standardised pathway and offered an individual appointment in surgical clinic. Four-hundred-forty were offered entry into pre-surgery program and 298 (67.7%) attended. One-seventy-nine (60%) of these completed the HIWMP. To date, 98 have undergone surgical intervention. 48 remain on the elective surgery waiting list, suggesting an 82% conversion rate to surgery. 5 have been removed from the waiting list having been treated elsewhere and 28 (6.36%) were deemed unsuitable for bariatric surgery at time of individual assessment and offered an alternative treatment pathway.

Conclusion

Obesity surgery services can use standardised referral requirements and pathways to ensure patients are appropriately selected and ready for surgery at the time of surgeon assessment and avoid delays and inefficiency.

P-378

STAPLE LINE COMPLICATIONS WITHOUT REINFORCEMENT, WITH OVERSEWING AND WITH BUTTRESSING USING OXIDIZED REGENERATED CELLULOSE IN LAPAROSCOPIC SLEEVE GASTRECTOMY, RANDOMIZED COMPARATIVE STUDY

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Background

Laparoscopic sleeve gastrectomy (LSG) is currently one of the most commonly performed bariatric procedures. Oversewing is one of most commonly performed techniques for staple line reinforcement. Oxidized regenerated cellulose (ORC) is an effective hemostatic agent with several advantages. This study aims to compare the outcomes of no-reinforcement, staple line oversewing and staple line buttressing with ORC in LSG.

Materials and Methods

Patients were randomized into three groups: 100 patients underwent LSG without reinforcement, 100 patients underwent LSG with oversewing of the staple line, and 100 patients underwent LSG with staple line buttressing by using ORC.

Results

The mean operative time was longer in patients with staple line oversewing; Group B (53.4 – 4.21 min) compared with no reinforcement and using the ORC over the staple line (p-value <0.01). The postoperative bleeding is significantly (p < 0.05) reduced with oversewing and with using ORC compared with the control group.

Conclusion

Oversewing of the staple line during LSG is a nonexpansive and easy method to decrease bleeding. However, it is time-consuming, associated with a higher incidence of staple line hematoma and postoperative vomiting. Using ORC is effective in reducing staple line bleeding in LSG compared with the control group.

P-379
STAPLE-LESS DIABETES SURGERY- TECHNIQUE AND SHORT-TERM RESULTS

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Introduction

Bariatric surgical procedures cause weight loss by restricting the amount of food the stomach can hold, causing malabsorption of nutrients, or by combining both gastric restriction and malabsorption. Bariatric procedures also often cause hormonal changes causing the resolution of type 2 diabetes (T2DM) and other comorbidities. Most Bariatric Metabolic surgeries today use minimally invasive techniques (laparoscopic surgery). However, all bariatric procedures done right now require stapler usage, causing a rise in bariatric surgery costs. This is not sustainable in developing countries where most obesity and diabetic patients are present.

Objective

We want to invent and propagate a stapler less procedure which can cater for a wide range of populations with low surgical costs.

Methods

Access the efficacy of T2DM resolution, weight loss and weight loss maintenance and analysis of the observation and efficacy resolution of co-morbidity after staple-less bariatric procedures.

Results

At 12 months of follow-up, 87.1% of the cohort were treated by staple-less bariatric procedures for diabetes remission. These patients achieved diabetes control (HbA1c, 6.8% 95%CI 6.5- 7.0) with decreased usage of oral diabetes medications and insulin withdrawal when previously used. Significant ($p<0.001$) improvements in %EWL, 77.7%, and 85.4% at 6-12 months, respectively, were noted after the insertion of the balloon. There was a significant ($p<0.001$) resolution in diabetes-related comorbidities (75% HTN and 73.3% DLP).

Conclusion

Staple-less bariatric procedures reduce the high cost of surgery at the expense of increasing surgical time, and the result is encouraged without any significant increase in complication.

Keywords: Staple-less, Bariatric procedures, Type 2 diabetes.

P-380

STATUS OF METABOLIC/BARIATRIC SURGERY IN TYPE 1 DIABETES MELLITUS: AN UPDATED SYSTEMATIC REVIEW AND META-ANALYSIS

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Background

The greatest challenge in translating the benefits of metabolic/bariatric surgery (MBS) to individuals with type-1 diabetes mellitus (T1DM) is the lack of well-designed clinical trials. Despite the positive relationship between childhood obesity and T1DM, due to lack of enough beta cells reserve, the decreased peripheral resistance after MBS may not be so effective compared to results in T2DM, and the role of MBS in T1DM is still contradictory.

Objectives

This systematic review and meta-analysis intend to evaluate the efficacy of MBS in patients with T1DM.

Methods

A systematic literature search and meta-analysis were performed in electronic databases up to July 2021. Abstracts were examined by two independent reviewers and selected based on specific inclusion criteria.

Results

In total, 27 primary studies comprising 648 subjects were included in this systematic review and meta-analysis. Patients had a mean age of 38.0 ± 7.3 years. Preoperative mean BMI was 42.6 ± 4.7 kg/m² and 29.4 ± 4.7 kg/m² after surgery, respectively. Following bariatric surgeries in patients with type 1 diabetes mellitus, insulin (unit/day) decreased by a weighted mean difference (WMD) of -10.59 . Also, insulin (unit/kg/day) decreased by a WMD of -0.2 , and HbA1C decreased by a WMD of -0.71 , showing MBS acceptable and durable effects of bariatric surgical procedures.

Conclusion

The current study shows that MBS reduces postoperative insulin requirement and improves HbA1c in T1DM patients with obesity and severe obesity. A careful multidisciplinary approach is necessary for each of these patients to determine whether weight reduction and benefits of obesity comorbidities outweigh the overall operation risks. High-volume randomized, prospective trials are necessary to elucidate the role of MBS in the treatment of patients with severe obesity and T1DM.

P-381

STOP THE BLEEDING: CAN TRANEXAMIC ACID MAKE GASTRIC BYPASS SURGERY SAFER? A RANDOMIZED CONTROLLED TRIAL (PATRY-TRIAL)

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Background

Fast-track protocols are frequently used in metabolic surgery and often include short-term thromboprophylaxis and short length of hospital stay. With these strategies there is a fine line between complications such as a hemorrhage or venous thrombosis. Over the years, the rates of venous thromboembolic events (VTE) have decreased, whereas there seems to be an increase in the occurrence of postoperative hemorrhage. Tranexamic acid (TXA) is a plasminogen inhibitor which inhibits fibrinolysis. In a pilot study TXA seemed to reduce the incidence of postoperative hemorrhage in 50 patients receiving sleeve gastrectomy, without increasing the risk of thrombosis. To investigate this in patients receiving (Roux-en-Y or one-anastomosis) gastric bypass, a phase III trial is necessary to compare the rate of postoperative hemorrhage in patients with and without TXA.

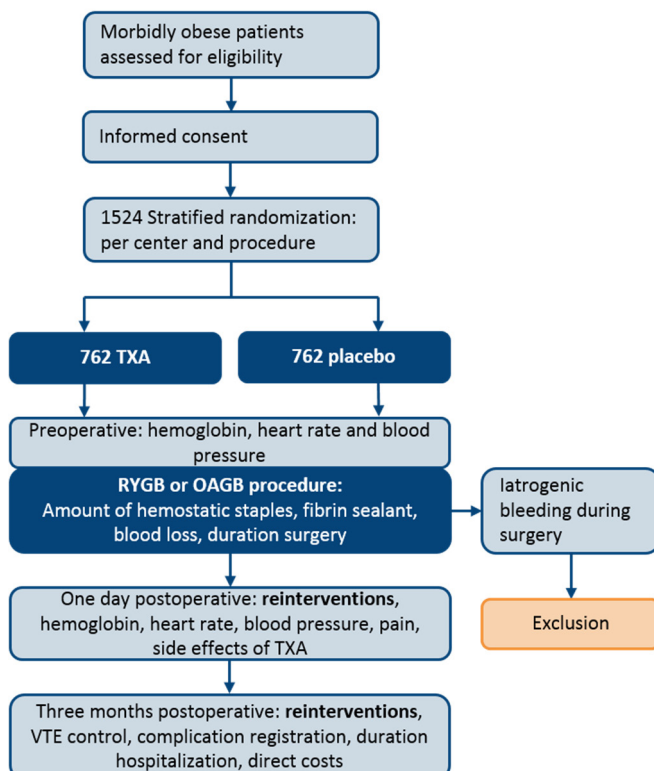
Objective

To investigate if peroperative administration of TXA can reduce the postoperative hemorrhage rate in patients who undergo gastric bypass.

Method

In this double-blind, multicenter randomized controlled phase III trial 1524 patients with severe obesity will be included. Inclusion criteria are aged 18 years and older, and eligible for metabolic surgery according to the IFSO guidelines undergoing gastric bypass. Patients unwilling to give informed consent, patients with a medical history of bleeding or VTE and patients that use therapeutic anticoagulants will be excluded. Patients will be randomized, into group 1: a single dose of 1500 mg TXA during induction of the procedure by anesthesiologist, or group 2: administration of placebo infusion. The primary outcome measure is rate of intervention for postoperative hemorrhage (i.e. administration of packed red blood cells, surgical-, endoscopic-, or radiological re-intervention). Secondary outcome measures are peroperative use of hemostatic staplers, fibrin sealant and blood loss, postoperative change in hemoglobin, heart rate, pain, minor and major complications, cost-effectiveness, hospitalization duration, side effects of TXA (i.e. rates of VTE) and mortality (Figure 1). Trial registration: NCT05464394

Figure 1. Study flow-chart



Abbreviations: TXA = tranexamic acid; RYGB = roux-en-y gastric bypass; OAGB = one-anastomosis gastric bypass; VTE = venous thrombotic event

of TXA (i.e. rates of VTE) and mortality (Figure 1). Trial registration: NCT05464394

Conclusion

To our knowledge, this study will be the first randomized controlled trial comparing postoperative hemorrhage after gastric bypass between patients with peroperative administration of TXA and placebo.

P-382

STUDY OF THE ASSOCIATION BETWEEN NON-ALCOHOLIC STEATOHEPATITIS AND THE PRESENCE OF HELICOBACTER PYLORI IN PATIENTS WITH OBESITY UNDERGOING BARIATRIC SURGERY

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Background

Non-alcoholic fatty disease is one of the leading causes of chronic liver disease in general and obese population. Several factors relate to its development and progression to non-alcoholic steatohepatitis (NASH). Helicobacter Pylori (Hp) infection has been proposed as a risk factor, although currently there is no conclusive evidence.

Objective

Study the relationship between NASH with Hp, and its association with metabolic syndrome in people with obesity undergoing bariatric surgery.

Methods

Descriptive observational study, 144 patients operated on for obesity, in whom an intraoperative liver biopsy was systematically performed and the presence of preoperative Hp was determined. The degree of steatosis and presence of steatohepatitis according to the NAFLD Activity Score were recorded. The chi-square test was used to evaluate the possible association between the presence of Hp and NASH, and a multivariate analysis was performed by logistic regression to adjust for confounding variables (Type 2 diabetes, hypertension, dyslipidemia, BMI and insulin resistance).

Results

The prevalence of Hp was 37%. 78.5% had steatosis and 18.1% met the anatomopathological criteria for steatohepatitis. 8.3% of the total patients studied had NASH and Hp positive. In patients with NASH, 46.2% had Hp positive and 53.8% had Hp negative ($p=0.314$). In the univariate study, a relationship was found between NASH and insulinemia $>25\mu\text{UI/mL}$ ($p=0.017$). An association was found between Hp positive and metabolic syndrome ($p=0.025$). In the multivariate analysis, hyperinsulinemia ($p=0.016$ Exp (B) 5.686) and hypertension ($p=0.05$ Exp (B) 4.420) were shown as independent risk factors for steatohepatitis.

Conclusions

The presence of steatohepatitis is higher in subjects with Hp positive than in those who are Hp negative, but these results were not statistically significant. However, there does seem to be an association between NASH and metabolic syndrome, and between the latter and Hp infection. Further studies are needed to determine the role of metabolic syndrome and Hp in the etiology of NASH, as well as to study other factors that may be involved, in order to identify which patients are more predisposed to developing NASH.

P-383

SURGICAL MANAGEMENT OF BOWEL OCCLUSION DUE TO HEMOBEZOAR IN ONE ANASTOMOSIS GASTRIC BYPASS

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Background

Intestinal obstruction after one anastomosis gastric bypass is a rare complication. The most common causes are related to internal hernias, narrowing, and acute edema of the intestinal anastomosis. Obstruction due to hemobezoar is even less frequent and has only been reported in roux-en-Y gastric bypass in the jejunum-jejunum anastomosis area. The prognosis of this complication depends on early diagnosis and treatment.

Methods

This is a 37-year-old male patient with grade III severe obesity with a BMI of 49 kg/m², without associated comorbidities, or a history of abdominal surgeries. He underwent one anastomosis gastric bypass with 240cm biliopancreatic limb. The surgery was uneventful and the intra-hospital evolution was normal. Prior to his discharge, 48 hours after surgery, contrasted fluoroscopy was performed, where adequate passage of the contrast and absence of leakage was evident. He was discharged with tolerance to clear liquids. Twenty-four hours after his discharge, he began with intense abdominal pain and tachycardia, for which he was hospitalized with a diagnostic suspicion of portomesenteric venous thrombosis. laparoscopy was performed, showing a dilation of the biliopancreatic limb secondary to a proximal obstruction 30cm from the anastomosis due to a hemobezoar clot. The suture line of the anastomosis was opened and an obstructive clot that completely occluded the intestinal lumen was removed without incident.

Results

The laparoscopic management of postoperative bowel obstruction in this case was safe and feasible. Small bowel obstruction is a known complication after gastric bypass, and its etiology is usually the result of internal hernia or others, these bowel obstructions generally occur late in the follow-up period, in contrast the bowel obstruction due to hemobezoar occurs in the early postsurgical period hence its suspected diagnosis and management should be considered.

Conclusions

A review up to 2017 of the IFSO in patients undergoing gastric bypass of an anastomosis only reported this complication on one occasion without specifying its management. We highlight the importance of this case because it is an extremely rare entity and there are no reports of its incidence.

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SURGICAL SPA: HOSPITAL ADMISSION FOR PRE-OPERATIVE CARE FOR SUPER-OBESE PATIENTS

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FAMENE, General surgery, João Pessoa, Brazil ⁽¹⁾ - UFPB, General Surgery, João Pessoa, Brazil ⁽²⁾ - FAMENE, João Pessoa, Brazil ⁽³⁾

Background

Pre operative care by multidisciplinary team is essential for the success of a bariatric surgery; especially for patients with BMI > 50 kg/m. In this group, post operative diseases and mortality are higher and weight loss before surgery can improve outcomes.

Objective

We report a reference center's experience with pre operative hospital admission in order to provide multidisciplinary follow up (by endocrinologist, cardiologist, pneumologist, nutritionist, psychologist, physiotherapist, speech therapist, physical education teacher, and others) and adequate preparation for patients with severe obesity and candidates for bariatric surgery. A 10% weight loss was proposed as a goal in order to release the patient for surgery.

Methods

Patients with severe obesity, candidates for bariatric surgery (who have failed weight loss after ambulatory care) were admitted on a reference center for bariatric surgery for a 4 weeks period. All patients went through psychological follow up, along nutrition therapy aiming caloric restriction + proper supplementation in order to prevent proteins loss. They also were introduced to a routine of physical activities, accompanied by a physical education teacher. Multidisciplinary medical team followed the patient through the whole period. A 10% weight loss was aimed.

Results

5 patients were admitted to the program. All of them completed the 4 weeks' period of follow up and were submitted to bariatric surgery after that time. The average weight loss was of 12%. All patients went through postoperative immediate care without serious complications (clavien dindo 1). Hospital discharge occurred 48 hours after surgical procedure.

Conclusion

Pre operative hospital admission may be a useful resource for patients with severe obesity who had failed an ambulatory approach for weight loss.

P-385

SYSTEMATIC REVIEW AND META ANALYSIS TO STUDY THE EFFECTS OF LEFT GASTRIC ARTERY EMBOLISATION ON WEIGHT LOSS: A NEW GATEWAY!

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Background

2.5million people in the UK are living with obesity (BMI >30 kg/m²) but only 5-6 thousand bariatric operations are performed in the NHS every year. Left gastric artery embolisation (LGAE) is an established treatment for managing upper gastrointestinal bleeding and has recently shown promising results for weight loss.

Objectives

Our primary objective was to conduct a metanalysis of LGAE intervention in adult (age>18) obese patients (BMI>30kg/m²). Outcome markers included weight change, safety reporting, changes in gut peptide hormone levels and HbA1c.

Methods

PRISMA guidelines were followed, and studies published till September 2022 were included. Excluded studies were conference proceedings, case series and reports, commentaries, letters, editorials, and abstracts with insufficient information. A metanalysis with multilevel meta regression analysis was conducted on % excess weight loss in the medium (6 months) and long term (12 months or more). ANOVA test was used to assess changes in Ghrelin, Leptin and HbA1c.

Results

13 studies were reviewed. 14.65% (-6.47-3.25) medium term and 16.26% (C.I:9.78-22.74) long term weight loss results were established. HbA1C at 6 months was significantly reduced (6.2±0.3 versus 4.92±0.34) (p<0.004). There were no significant changes in Ghrelin or Leptin. Cases of superficial gastric erosions were managed non-surgically, healed on endoscopy by day 90 and one case of subclinical pancreatitis was reported.

Conclusion

LGAE has the potential to be a day case bridging treatment option between existing medical weight management and bariatric surgery. A placebo controlled RCT is required to further validate LGAE as a treatment option for obesity and assess its safety profile.

P-386

SYSTEMIC SCLEROSIS IN TWO PATIENTS UNDERGOING METABOLIC SURGERYNikita Arora - Peter Szasz - Mohammed AlDamry - Boris Zevin*Queen's University, Department of General Surgery, Kingston, Canada***Background**

Systemic sclerosis is a progressive disease, affecting multiple organ systems, with the hallmark feature being scleroderma. Patients have a four-fold higher mortality rate compared to matched controls. There is a paucity of literature on patients with systemic sclerosis seeking metabolic surgery.

Objectives

We present two cases of patients with systemic sclerosis who underwent metabolic surgery.

Methods

This is case series.

Results

The first patient was a 61-year old female with a BMI of 34. She was on prednisone, methotrexate and golimumab, for her rheumatoid arthritis. Her obesity-related complications included asthma, gastroesophageal reflux, inflammatory arthritis, depression and obstructive sleep apnea. She had no scleroderma esophagus on preoperative manometry and equivocal lower esophageal sphincter function. Her esophagogastroduodenoscopy was normal. Her upper gastrointestinal series demonstrated distal esophageal motility. Given her dysmotility, it was discussed that a Roux en Y bypass would be ideal, however, due to the risk of anastomotic leak in a patient on steroids, she ultimately underwent a gastric sleeve resection. She had intermittent dysphagia postoperatively, and underwent four hospitalizations for aspiration episodes. Her BMI nadir was 27.7 and she did not have resolution of any of her comorbidities. Repeat manometry was done and demonstrated scleroderma esophagus. A gastrojejunostomy was placed for enteric feeds and aspiration prevention. Given the high pressure system created by her sleeve gastrectomy and her ongoing aspiration episodes, she underwent conversion to a Roux en Y gastric bypass, and thereafter, did not have any further aspiration episodes or admissions to hospital. Her BMI postoperatively was 34.1. Similarly, we cared for a second patient: a 62-year old female with systemic sclerosis and no preoperative scleroderma esophagus on imaging. She was not on steroids preoperatively and her BMI was 47.4. She underwent a Roux en Y gastric bypass upfront. Her BMI nadir was 27.9 postoperatively. She underwent resolution of her arthritic symptoms and GERD. She had no dysphagia or aspiration postoperatively.

Conclusion

Systemic sclerosis is a progressive disease, that can involve the esophagus. The high pressure system created by a sleeve gastrectomy may worsen dysphagia symptoms in this population, and thus, should be considered with caution.

P-387
TAILORED BILIO-PANCREATIC LIMB IN MGB-OAGB, A 14 YEAR FOLLOW UP
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Background

Still controversy exists in the bypass limb length in One Anastomosis Gastric Bypass (OAGB). “Mini-Gastric Bypass” original technique (MGB-OT) includes a “tailored” Bilio-Pancreatic Limb Length (BPLL).

Objective

The purpose of this study was to analyze the 1, 5 and 10 & 14 year weight loss outcomes of a “tailored” BPLL in patients undergoing the MGB-OT version of the “OAGB.” and to find out a relationship between the BPL & the Excess weight loss (EWL) if it exists.

Results

190 patients underwent MGB-OT with a tailored BPLL: mean BMI 54.3 +/- 13.2 kg/m² (range 38 - 88), mean BPLL 184.4+/-53.7 cm (range 150-350), the 14 year % Excess weight loss (%EWL) mean 66.2%+/-17.7 (range 48-124). The mean %EWL at 14 years: for BPLLs of 150, 200, 250, 300, 350cm, was: 54.1%, 66.2%, 72.4%, 78.9%, 86.2% respectively. There was a strong significant linear association between BPLL and %EWL ($y = 0.3x + 9$, $R^2 = 0.79$, $p < 0.0001$) as well as all other short and long term weight loss outcome measures. Although, there was higher incidence of excess weight loss and lower albumin with the higher limb lengths reaching 2.5% & 2.8% respectively with 300 and 350 cm BPL.

Conclusion

The study demonstrates that there is a linear correlation between the BPL and the EWL, increasing directly as the BPLL is lengthened up to at least 350 cm. Although longer BPL is much more effective in the super obese, it needs to be used cautiously, as it brings some higher chances of hypoalbuminemia.

P-388

TAILORED-PROGRAM FOR WOMEN WITH ENDOMETRIAL CANCER NEEDING OBESITY TREATMENT BEFORE ONCOLOGICAL SURGERY ALLOWS SAFE, RAPID ACCESS, EVEN IN GOVERNMENT-FUNDED HEALTHCARE

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Background

Endometrial cancer prevalence is rising. Among all cancers, it also has the highest association with obesity. Standard oncological treatment requires surgical resection, yet the complications and comorbidities concomitant for those living with obesity may preclude them from such treatment. Bariatric and metabolic surgery is a well-known, safe, and effective intervention which can improve candidacy for surgery yet the paucity of resources in Government-funded healthcare centers across Australia has meant access to surgery for obesity is severely limited. With only 17 government-funded centres in the country offering surgery for obesity, the waiting times can be extensive which can result in increased clinical risk for those awaiting treatment for endometrial cancer. In 2022, our service developed a tailored-treatment-pathway for women seeking bariatric surgery for the purpose of improving candidacy for endometrial cancer surgery, incorporating medical and surgical interventions, and facilitated fast-track access to obesity care. We sought to examine the early experiences of the pathway implementation.

Methods

The multidisciplinary team lead by a bariatric surgery nurse-specialist-coordinator, bariatric surgeons, anaesthetists, endocrinologist, psychologist, and dietitians designed a treatment pathway, which was instituted in June 2022. The pathway included anaesthetist-augmented patient-selection, early review and treatment from endocrinologist, surgical assessment, and integrated health interventions. Early experience was examined.

Results

Since implementation in June 2022, 6 women have been referred for bariatric surgery to facilitate surgical resection of endometrial cancer from gynaecology-oncology healthcare service. Of these, 5 chose to proceed toward bariatric surgery and 1 declined following a process of informed consent. Two women participated in both medical and surgical treatment arms, while 3 received only surgical intervention. All participants received nursing, psychology, and dietitian support, and underwent bariatric surgery safely within 6 months of their initial referral.

Conclusion

A world-first tailored pathway for surgical treatment of obesity, to facilitate standard oncological care for those women who would otherwise be unsuitable for resection was developed. Initial experience has shown this to be a safe, effective, and efficient way to ensure timely care, despite otherwise extremely poor access to government-funded healthcare. Future studies will assess impact of this pathway on oncological and obesity outcomes.

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TAILORING LIMB LENGTH BASED ON TOTAL SMALL BOWEL LENGTH IN ONE ANASTOMOSIS GASTRIC BYPASS SURGERY (TAILOR): BASELINE AND ONE-YEAR RESULTS

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Background

Tailoring the BP-limb length in the one anastomosis gastric bypass (OAGB) is suggested to be beneficial based on retrospective studies, but there is a lack of randomized trials to confirm this.

Objectives

The objective of this study is to determine if tailoring the length of the BP-limb based in relation to total small bowel length (TSBL) results in superior outcomes regarding weight loss, vitamin deficiencies, and bowel movements in comparison to using a fixed BP-limb length.

Methods

The TAILOR study is a double-blind single-center randomized controlled trial (ICTRP NL7945). Patients scheduled for primary OAGB were randomly assigned either to a standard BP-limb length of 150cm or to a tailored BP-limb based on TSBL: TSBL < 500 cm, BP-limb 150 cm; TSBL 500–700 cm, BP-limb 180 cm; TSBL > 700 cm, BP-limb 210 cm. Weight loss, nutritional deficiencies, and remission of comorbidities will be compared between both groups with a follow-up of five years.

Results

Recruitment of patients was from September 2020 to August 2022. With a success rate of 83% in intraoperative measurement of TSBL, 212 patients were included. Average TSBL was 657 ± 128 cm (range 295-1020 cm). The mean operative time was 50 ± 10 minutes. In the intervention group (n=107), a BP-limb length of 150 cm was applied in 9 (8%), 180 cm in 57 (53%), and 210 cm in 41 (38%) of the patients. No differences were observed between the groups in short-term complications, such as bleeding (2%), anastomotic leak (0.5%), and intestinal injury intraoperatively (0.5%).

Conclusion

Tailoring BP-limb length based on TSBL is a feasible and safe technique regarding short-term complications. The one-year follow-up outcomes of the TAILOR study including efficacy and long-term complications will be finalized in August 2023 and presented at the congress.

P-390

TECHNICAL DETAILS OF LAPAROSCOPIC SLEEVE GASTRECTOMY WITH ATTENTION TO STAPLE LINE LEAK AND HEMORRHAGE: DISCUSSION OF 3,031 CONSECUTIVE CASES

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Background

Laparoscopic sleeve gastrectomy is among the most widely utilized and effective bariatric-metabolic surgeries. Gastric staple line leak and hemorrhage remain the most serious complications and are both associated with a high degree of morbidity and mortality. Techniques to minimize the risk of sleeve gastrectomy leak and hemorrhage have been published although no universally agreed upon set of techniques exists.

Objectives

Report conceptual and technical changes aimed towards leak and hemorrhage reduction after sleeve gastrectomy from a single-surgeon experience over 10 years.

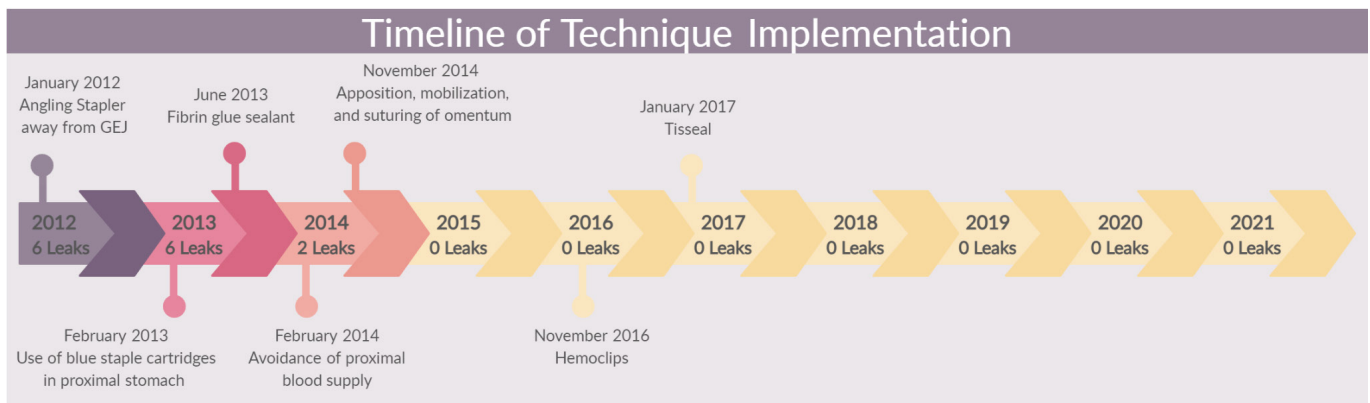
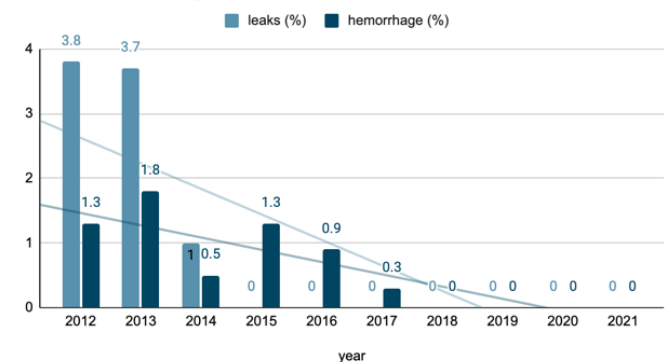
Methods

3,031 consecutive sleeve gastrectomy cases between 2012 and 2021 were reviewed retrospectively. Patient characteristics, incidence of leaks and hemorrhage, and percent body weight loss at 6 months were reported for each year.

Results

With the implementation of the described techniques, the rate of sleeve leaks fell from 3.8% in 2012 to 0% in 2015 through 2021, and hemorrhage fell from 1.3% in 2012 to 0.1% in 2018 through 2021. Weight loss remained consistent, as depicted by 6-month change in body weight and percent excess BMI lost.

Leak & Hemorrhage Incidences



Conclusion

In this single-surgeon experience, sleeve gastrectomy leak rate fell to 0.0% and staple line hemorrhage rate fell to 0.1% with the implementation of specific technical modifications in the procedure, spanning over 3,031 consecutive cases.

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TELEHEALTH AND MEDICAL TOURISM IN BARIATRIC SURGERY WITH A SCOPING REVIEW ON OUR EXPERIENCE

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Background

With the rapid progress in mobile healthcare and Internet medicine, occurrence of pandemic (COVID-19); Telehealth and telemedicine provided a salvage for both patients and healthcare providers.

Aim

This study analyses the differences between telehealth and telemedicine and their role in medical tourism.

Methods

We explored the value of telehealth and telemedicine for the patients and the healthcare providers with projection on the bariatric surgery field. Identifying its merits and potential barriers and reporting our experience in the field of medical tourism with a peak on our smart application.

Conclusion

Telehealth is flourishing strongly since the emergence of COVID. Telehealth is a strong ground for medical tourism to grow and be effective.

Keywords: medical tourism; healthcare telecommunication system; internet healthcare services; medical travel intentions.

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THE APPLICATION OF ERAS PROTOCOL IN BARIATRIC AND METABOLIC SURGERY: ANALYSIS OF 15.173 PATIENTS OPERATED IN A BRAZILIAN SRC CENTER

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Background

The bariatric surgery has several benefits in terms of sustainable weight loss and improvements or resolution of several metabolic comorbidities. Latest evidence show that ERAS protocol in Bariatric and Metabolic surgery allow important benefits to the patients. The use this protocol can reduce the rates of morbidity after surgery and may shorten functional recovery as well as length-of-stay (LOS) in bariatric surgery and rate hospital re- admission in the 1 30 post-op days.

Objectives

To analyze the strength of hospital readmission in the first 30 days of post-op.

Methods

Observational study of 15.173 consecutive patients submitted to bariatric surgery in a SRC center in São Paulo, Brazil, in the past 10 years. The patients were divided into 2 groups. Group 1 (from 2013 to 2015) presenting the criteria: (1) absence of indication to ICU, (2) patients living in the same city of surgery, (3) absence of intra-operative complications, and (4) less than three comorbidities. Group 2 (from 2016 to 2023) all the ICU indication in post-op time, poor diet acceptance or surgery complications.

Results

We operated 3566 patients between January 2013 and December 2015; 11.607 patients between January 2016 and January 2023. In 2013 the patients were discharged on the 3rd postoperative day. In the following years the mean discharge day was the first post-op. In group 1, 2638,84 patients (74%) were included in our criteria and 2426 patients of those (92%) received early discharge. 68% of all patients were discharged on the first day using these strict criteria. In group 2, 11.026 patients (95%) received early discharge in the first 24 hours after surgery. 30-day readmissions decreased from 3,8% in Group 1 to 2,1% in Group 2. It demonstrate better results in the last 8 years.

Conclusion

The inclusion of all patients as criteria for ERAS protocol in the last 8 years reduced the duration of hospitalization stay (less than 24hs) as well as maintaining or reducing low readmission rates. Therefore the application of ERAS protocols in bariatric surgery effectively shortening the length of a hospital stay without compromising morbidity.

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THE COMPARISON OF VISUALISATION OF GLOTTIS DURING DIRECT LARYNGOSCOPY USING MACINTOSH OR MILLER BLADE LARYNGOSCOPES IN PATIENTS WITH OBESITY

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Background

Patients with obesity are more difficult to intubate than patients of a normal BMI, which may lead to serious complications like failed intubation, hypoxia and related complications including brain injury. Due to anatomical variations, the usage of a different shape of the intubation blade might be more efficient. The hypothesis is that the Miller blade may increase visualisation of glottis in patients with obesity. This blade differs from the standard Macintosh blade by its shape. The Macintosh blade is curved while the Miller blade is straight.

Objectives

The aim of our study was to compare the visualization of the glottis during attempts of endotracheal intubation using Macintosh blades and Miller blades in patients with a BMI > 25.

Methods

A total number of 178 patients were included into our study who underwent elective surgery. The average BMI of these patients was 28,75. The patients received standard anesthesia including muscle relaxants three minutes prior to the laryngeal intubation. The direct laryngoscopy was conducted twice using a Miller blade and a Macintosh blade in random manners. After each attempt, the visibility of the vocal cords was graded according to the Cormac-Lehane scale (class 1 to 4 with 1 having the best visibility and 4 only visualizing the tip of the epiglottis).

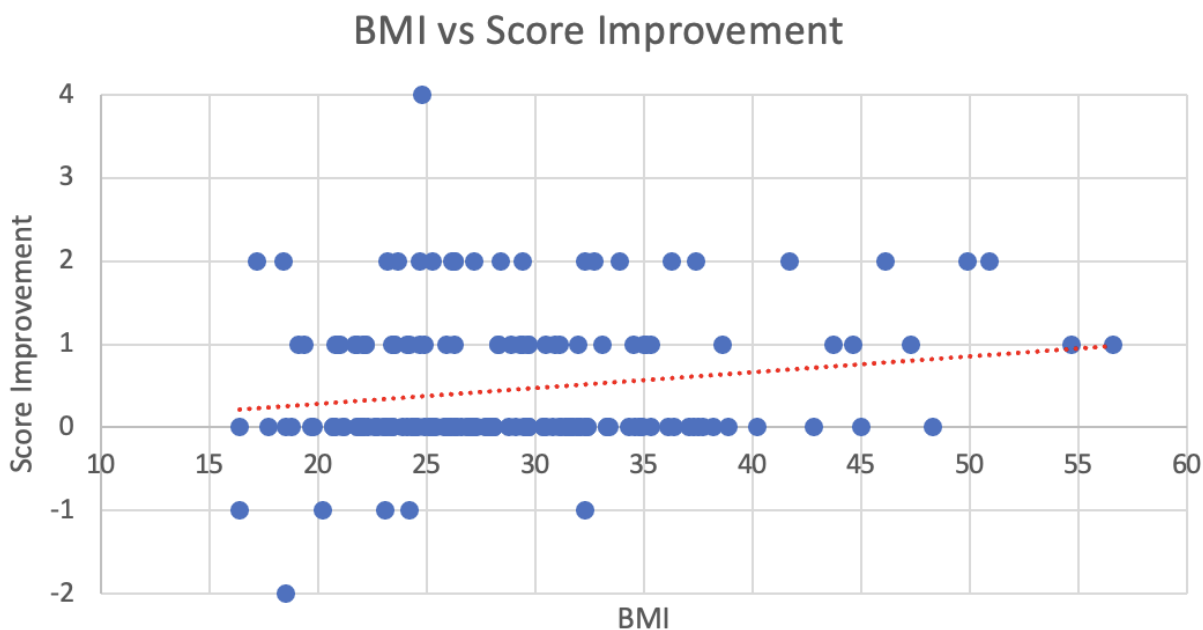
Results

By comparing the CL scale we found that for 63 patients (35,4 %) the scale decreased by using a Miller blade over a Macintosh blade, hence the visualization of the vocal cords was improved. For 109 patients (61,2 %) the scale remained the same and for 6 (3,4%) patients the scale increased by 1-2 classes, which means the visualization got worse. The comparison of correlation of BMI and change in CL scale is presented in Fig.1.

Conclusions

The use of a Miller blade instead of a Macintosh blade can improve the visualization of the vocal cords in endotracheal intubations of obese patients.

Table 1. The correlation between BMI and Cormack-Lehane Scale achieved in Miller blade laryngoscopy after Macintosh blade laryngoscopy (Improvement of visualization of glottis is counted as a decrease in CL scale).



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THE CONTINUAL RISE OF VITAMIN B6. EXCESSIVE OVER THE COUNTER SUPPLEMENTATION RESULTS IN ELEVATED VITAMIN B6

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Background / Introduction

Nutritional deficiencies post bariatric surgery; with life long surveillance and necessary supplementation are widely reported in the literature. Whilst deficiencies are well documented, the risks associated with excessive intake are less so. Vitamins like pyridoxine (B6) can lead to serious health complications if consumed in excess, with consumption of energy drinks being reported as one of the factors resulting in elevated B6 levels. In Australia, vitamin B6 is commonly found in multivitamins and mineral supplements including, B complex, magnesium and zinc and over 1000 medications. The labeling laws in Australia do not disclose B6 risks in doses under 50mg. Inappropriate multivitamin supplementation, may provoke vitamin B6 hypervitaminosis or toxicity.

Objectives

The study aimed to analyse plasma vitamin B6 levels and investigate the prevalence of hypervitaminosis both pre and post operatively. Further to determine contributing factors associated with elevated B6 levels.

Methods

A prospective study in a single private practice clinic, analysing patient data of individuals who underwent full nutritional screening either as part of initial or post bariatric surgery consultations. Patients with elevated vitamin B6 were further assessed on current multivitamin supplementation, medications and consumption of energy drinks.

Results

Serum pyridoxine levels were found to range from 300-4600nmol/L. Cessation of supplements, medications or beverages containing pyridoxine, resulted in swift reduction of B6 levels. Excessive B6 levels were found in patients consuming energy drinks, over the counter melatonin and /or multivitamin supplementation. The most prevalent cause for excess levels was patients consuming multiple supplements daily all containing vitamin B6 beyond the RDI.

Conclusion

Non-compliance with bariatric recommended multivitamins and self prescribed multivitamins or other vitamin or mineral supplements are the common cause of excessive intake of vitamin B6. Tailored supplementation, close monitoring and better patient education is required surrounding the need for appropriate supplementation and possible risks associated with over supplementation.

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THE DIFFERENCES IN POSTOPERATIVE SATISFACTION OF LAPAROSCOPIC SLEEVE GASTRECTOMY BETWEEN MEN AND WOMEN

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Background

Obesity has received increasing attention, but gender differences are rarely considered in the clinical management of this disease. A better understanding of gender as an influencing factor in people with obesity is an important step towards improving the prevention and treatment of obesity.

Objective

This study compared the postoperative satisfaction of LSG in the treatment of obesity between men and women.

Methods

Patients who underwent LSG in Affiliated Hospital of Xuzhou Medical University from December 2020 to December 2021 were collected. The patients were divided into male group and female group. The differences in one-year postoperative weight loss satisfaction and complication relief satisfaction between the two groups were statistically analyzed.

Results

The study finally included 347 eligible patients. Among the eligible patients, 104 (29.97%) were male and 243 (70.03%) were female. The State software was used to match the male patients and the female patients according to the preoperative BMI, and 88 women and 88 men were successfully matched. The comparison of paired male and female patients' satisfaction showed that there were statistically significant differences in weight loss satisfaction and complication relief satisfaction ($P < 0.01$), and the male patients' satisfaction score of weight loss was higher, and the female patients' satisfaction score of complication relief was higher.

Conclusion

Male patients are more satisfied with postoperative weight loss, and female patients are more satisfied with postoperative complications relief, indicating that male patients are more concerned about postoperative complications relief, and female patients are more concerned about body and shape. Compared with male patients, female patients have higher expectations for weight loss efficacy.

Table 1. The results of postoperative satisfaction between matched male and female patients.

Score of satisfaction	Male (n=88)	Female (n=88)	t	P
Weight loss	9.19±1.14	8.44±1.72	3.405	0.001
Complication relief	8.87±1.31	9.52±0.60	-3.953	<0.001

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THE EFFECT OF ANTRAL RESECTION START POINT ON POST SLEEVE GASTRECTOMY GASTROESOPHAGEAL REFLUX SYMPTOMS AND WEIGHT LOSS OUTCOMES

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Purpose

Sleeve gastrectomy (SG) has gained worldwide popularity by surgeons due to acceptable results in weight loss and obesity associated medical problems. Distance from the pylorus during antral resection in SG may be effective in decreasing the occurrence of gastroesophageal reflux disease (GERD). The aim of this study was to evaluate GERD symptoms and weight loss outcomes in two groups of SG patients with different start points of antral resection.

Methods

This is a prospective cohort study on 220 patients who underwent SG between June 2019 to July 2021, aged 18 and above, BMI ≥ 40 kg/m², or BMI > 35 kg/m² with at least one obesity associated medical problem. According to the start point of antral resection the patients were divided in two groups (group A: from 2cm of pylorus and group B: from 4cm of pylorus). Evaluation of GERD was performed using GerdQ questionnaire at 12-month follow up.

Results

Mean age and BMI of all patients were 37.6 ± 10 year and 44.8 ± 5.7 Kg/m² at the time of SG. Totally 153(69.5%) of the patients were female. De novo GERD after 12 months in the groups A and B was found in 18 (20%) and 19 (21%) patients. TWL% at 12 month follow ups, were 33.9% and 32.5% in group A and B respectively.

Conclusion

Antral resection's start point has no statistically significant effect on the excess and total weight loss indices, resolution of the obesity-related medical problems and De novo GERD between 2 and 4 cm start point for antral resection during SG.

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THE EFFECT OF EATING ATTITUDE ON WEIGHT LOSS AFTER BARIATRIC SURGERY

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Background

Obesity is a chronic disease and causes several medical and psychiatric complications. There are a lot of surgical and nonsurgical therapies of obesity. Bariatric surgery is the most effective therapy of obesity nowadays.

Objectives

Several psychological factors may affect the success of bariatric surgery. This study aims to evaluate eating attitude relationship with the success of bariatric surgery.

Methods

This study was carried out on 1248 patients operated between March 2014 and December 2019. All patients underwent laparoscopic sleeve gastrectomy. The patients were asked to fill Eating Attitudes Test-26 (EAT-26) questionnaire preoperatively. The patients weight losses were followed for three years after surgery. The patients were divided into two groups (Group1: EAT-26 score lower than 20, Group2: EAT-26 score is equal or higher than 20). Statistical analyses were performed with SPSS-22. The significance level was set at 0.05.

Results

There were 909 women (72.8%) and 339 men (27.2%) with a mean age of 42.2 years (range 14-69 years). Women rates were higher in Group2 compared to Group1 (83.8% vs 69.9%). This gender difference between two groups was statistically significant($p=0.000$). The patients were followed up at one month, three months, six months, one year, two years and three years postoperatively. We compared the percentage of total body weight loss (TBWL%) between two groups after surgery (Table1). Statistically significant difference between two groups were observed only at 12 months.

Conclusion

EAT-26 is a screening test to help determine whether the patient may have an eating disorder. Although there is a statistically significant weight loss at 12 months between two groups, there is no significant difference at other follow-up dates. This study shows that eating attitudes before surgery was not related to the outcome of the surgery.

Table 1. Comparison of %TBWL between Group 1 and Group 2.

Follow-up	Group1*	Group2**	p value
1.month	10,94	10,95	0,967
3.months	20,67	20,45	0,467
6.months	29,53	28,71	0,083
12.months	36,38	34,75	0,026
24.months	35,66	34,42	0,203
36.months	34,19	32,95	0,332

%TBWL: The percentage of total body weight loss.

* Group 1:Eating attitudes test-26 score under 20.

**Group 2:Eating attitudes test-26 score equal or higher than 20.

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THE EFFECT OF LAPAROSCOPIC SLEEVE GASTRECTOMY ON LIVER STEATOSIS MEASURED WITH ULTRASONOGRAPHY

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Background

Nowadays, non-alcoholic fatty liver disease (NAFLD) is the most common cause of chronic liver disease and is highly prevalent among patients with obesity.

Objectives

The aim of the study was to analyze the effect of laparoscopic sleeve gastrectomy on the amelioration or resolution of NAFLD during one-year observation.

Methods

A retrospective analysis of 55 patients diagnosed with NAFLD before LSG was performed. The diagnosis of NAFLD was based on transabdominal ultrasonography. Follow-up visits were scheduled 6 and 12 months after the surgery. Anthropometric measures, liver enzymes profile and abdominal ultrasonography were performed.

Results

The median age of patients was 47 years. 23 women (42%) and 32 men (58%) were included in the study. The mean preoperative BMI was 47.43 kg/m². Before the surgery, 16 patients presented third-degree liver steatosis, in 33 patients second degree of steatosis was observed and 6 patients were diagnosed with first-degree of liver steatosis. Six months after the surgery, liver steatosis was observed in 2, 13 and 20 patients accordingly. After 12 months of observation, 19 patients had a first degree of hepatic steatosis, and the rest of the patients achieved full remission in ultrasonography imaging.

Conclusion

Liver steatosis, measured by ultrasonography, improves after laparoscopic sleeve gastrectomy, achieving a complete resolution in 65.5% of the cases. LSG is an effective method for the resolution or amelioration of NAFLD.

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THE EFFECT OF PHYSICAL ACTIVITY AND BARIATRIC SURGERY ON DNA METHYLATION: LITERATURE REVIEW

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Background

Physical exercise and bariatric surgery can promote epigenetic changes such as DNA methylation in genes related to metabolic and inflammatory pathways. The occurrence of hypermethylation of CpG sites of pro-inflammatory genes results in gene silencing, reducing the ability to secrete cytokines and decreasing the pro-inflammatory condition.

Objectives

Conduct a literature search to verify the relationship between physical exercise and DNA methylation in pre and post bariatric surgery patients.

Methods

Data sources searched were PubMed, Cochrane and LILACS. The keywords Physical Activity and Bariatric Surgery and DNA methylation were used. Inclusion criteria were studies performed in adults before and after bariatric surgery that evaluated physical activity or exercise.

Results

5 studies were found. Of these, 4 were excluded: 2 were systematic reviews and their articles did not address bariatric surgery and exercises, 1 Trial registry record and 1 was not related to physical exercise. The eligible study aimed to investigate the effect of a combined exercise program for 6 months on the DNA methylation profile in women undergoing bariatric surgery. Of 20 CpG sites that were methylated after 6 months of the exercise intervention, 10 were hypermethylated and 10 hypomethylated. Regarding the metabolic pathways, only the Th17 cell differentiation pathway (pro-inflammatory cell subset) showed changes in methylation. In the CpG sites of the Th17 pathway, there was hypermethylation of the CpG sites located in the HLA-DOA, IL1RAP and NFATC3 genes, and hypomethylation of the CpG sites located in the HLA-DMB, HLA-DQB1, IL23R, IL2RA and MAPK10 genes. The Th17 cell differentiation pathway is involved in the pathophysiological mechanisms of inflammation.

Conclusion

Few studies were found on the subject. The study found demonstrates that physical exercise seems to have an effect on chronic inflammation related to obesity through changes in DNA methylation patterns in women undergoing bariatric surgery. This condition may be related to the improvement in the metabolic state provided by the epigenomic plasticity associated with bariatric surgery and the physical training program.

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THE EFFECT OF POLYGLYCOLIC ACID SHEET ON PREVENTING INTRATHORACIC SLEEVE MIGRATION AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY

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Background

Postoperative gastroesophageal reflux disease (GERD) is one of the most troublesome issues related to laparoscopic sleeve gastrectomy (LSG), and intrathoracic sleeve migration (ITSM) is one of the factors contributing to its development.

Objectives

The purpose of this study was to investigate whether the occurrence of ITSM after LSG can be prevented by applying a polyglycolic acid (PGA) sheet around the proximal part of the sleeved stomach.

Methods

A retrospective analysis was conducted using the electronic medical records of our hospital. According to the time period, forty-six patients who underwent LSG between May 2020 and January 2021 were divided into two groups: the fundocrural fixation (FF) group in the first half (n=23) and the PGA sheet (PGAS) group in the second half (n=23). In the PGAS group, Neoveil™ sheet (Gunze Ltd.) were applied to the proximal part of the sleeved stomach to prevent ITSM. We compared the two groups with respect to one-year postoperative GERD, assessed by endoscopy and the acid-reflux score in the F-scale questionnaire, as well as the incidence of ITSM, evaluated using coronal-view reconstructive computed tomography (CT) images.

Results

There are no significant differences between the FF group and the PGAS group in terms of patients' background and operation time, and one-year postoperative total body weight loss. No adverse effects were observed in the PGAS group during the postoperative one-year follow-up. While the grading of postoperative hiatal hernia using the Hill classification was not significantly different between the two groups, the PGAS group had a significantly lower incidence of ITSM than the FF group (13% vs. 52%, $p<0.05$). Although there was no significant difference in the change of reflux esophagitis according to the Los Angeles classification one year after surgery between the groups, the F-scale score and the rate of acid-reducing medicine usage were less pronounced in the PGAS group (2.57 ± 2.4 vs. 3.91 ± 3.9 , 30% vs. 65%, $p<0.05$).

Conclusion

Although this study is limited to a one-year postoperative validation, it suggests that applying PGA sheet can be a safe and effective way to reduce postoperative ITSM and prevent exacerbations of postoperative GERD in obese patients undergoing LSG.

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THE EFFECT OF RESIDUAL STOMACH VOLUME ON BODY MASS INDEX, EXCESS WEIGHT LOSS RATE AND METABOLIC RESPONSE AFTER SLEEVE GASTRECTOMY

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Background

Laparoscopic sleeve gastrectomy (LSG) is the most preferred method among surgical treatments for obesity. Weight loss is related to the residual gastric volume (RGV) where weight loss increases inversely proportional to RGV after LSG. Computerised tomography (CT) is recognized as a reliable and reproducible technique for measuring RGV. In our study, reduction in body mass index (BMI), amount of excess weight loss (EWL), reduction in HbA1c and metabolic response were analyzed according to the RGV calculated by 3D- CT between 6-12 months after LSG for obesity.

Objectives

To investigate the metabolic response and BMI reduction according to the RGV between 6-12 months after the operation who underwent LSG for obesity.

Methods

Patients who underwent LSG in our clinic by the same team and with the same standardized method were evaluated. RGV were calculated from the images after 3D-CT between 6-12 months postoperatively. BMI, EWL, total cholesterol, LDL, HDL, VLDL, triglyceride, HbA1c, total protein, albumin values were recorded preoperatively and at the time of residual volume measurement.

Results

The study included 49 patients who underwent LSG for obesity and who were 6-12 months postoperatively. The mean preoperative BMI was 47.26 (± 6.21). The mean RGV was 155.36 cc (± 56.71). The mean BMI at the time of evaluation was 28.44 (± 3.23) and the relationship between this value and RGV was statistically significant ($p < 0.001$). The mean EWL at the time of evaluation was 29.27 (± 7.66) and the relationship with RGV was statistically significant ($p = 0.001$). The relationship between the postoperative mean value of HbA1c and RGV was statistically significant ($p = 0.004$). The relationship between the change in HbA1c values ($p = 0.828$), the relationship between the change in LDL values ($p = 0.661$), the relationship between the change in HDL values ($p = 0.848$), the relationship between the change in triglyceride values ($p = 0.641$), the relationship between the change in VLDL values ($p = 0.794$), the relationship between the change in total protein values ($p = 0.539$) and the relationship between the change in albumin values ($p = 0.824$) were analyzed preoperatively and postoperatively.

Conclusion

The smaller the RGV, the higher the %EWL and the smaller the RGV, the more HbA1c decrease postoperatively were found.

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THE EFFECT OF REVISIONAL ONE ANASTOMOSIS GASTRIC BYPASS AFTER SLEEVE GASTRECTOMY ON GASTROESOPHAGEAL REFLUX DISEASE, COMPARED WITH REVISIONAL ROUX-EN-Y GASTRIC BYPASS: SYMPTOMS AND QUALITY OF LIFE

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Background

Gastroesophageal reflux disease (GERD) is common after sleeve gastrectomy (SG). We aimed to evaluate the effect of revisional one anastomosis gastric bypass (OAGB) on GERD, compared with revisional roux-en-y gastric bypass (RYGB)

Methods

A retrospective single-center study of a prospectively maintained patient registry (2018-2022). All patients with GERD undergoing OAGB and RYGB after SG were extracted and included in the study.

Results

Seventy-eight SG patients had conversion to OAGB (n=31) and RYGB (n=47). Baseline characteristics were similar except age (43.8±11.5 vs. 50.3±13.4 years;p=0.03), body mass index (39.9±8.8 vs. 30.6±6 kg/m²;p<0.001), time interval (8±2.7 vs. 6.4±3.4 years;p=0.01), and sleep apnea (29% vs 8.5%; p=0.01), respectively. There was no significant difference between groups in number of patients consuming proton pump inhibitors (70.1% vs. 72.3%; p=0.66), GERD-health related quality of life (HRQL) score (9.6±7.2 vs. 13.1±8; p=0.06), and pathological endoscopic findings (48.4% vs. 46.8%; p=0.89). Major complication rates were 0% vs. 8.5% (p=0.09). At 32.4 months follow-up, total weight loss was 22%±12.9 and 4.4%±14.6 (p<0.001), GERD resolution 77.4% and 91.9% (p=0.03), HRQL scoring improved to 1.7±4.5 and 1.7±2.7;p=0.94 for OAGB and RYGB, respectively .

Conclusions

SG conversion to RYGB provides better chances for definitive treatment of GERD. OAGB results in good symptom resolution and improved quality of life and may be considered for post-SG GERD treatment. The most appropriate solution should be tailored to each patient.

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THE EFFECT OF THE LIFE QUALITY OF PATIENTS WITH OBESITY AND ITS RELATED FACTORS

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Background

Basic on the data the World health organization (WHO) shows. People with obesity increased two times globally and over 650 million populations for obesity criteria from 1975 to 2016. Obesity was affected by health problems, and they also increased death rates and decreased life quality, such as decreased social interaction and self-esteem, increased isolation of the community, stress, depression, and negative mood. Many studies suggested that weight loss could benefit health and prevent diseases. Bariatric surgery could help with weight loss and maintain body weight, it also could extend the life of people with obesity (Castanha et al., 2018).

Objectives

Few discussions about the quality of people with obesity and their related factors in Taiwan. The study proposed to discuss the relationship of people with obesity before bariatric surgery with life quality and depression.

Methods

A total of 200 cases finished the Gastrointestinal Quality of Life Index (GIQLI), Taiwanese Depression Questionnaire (TDQ), Multidimensional Body–Self Relations Questionnaire (MBSRQ), Interpersonal Support Evaluation List (ISEL), and basic demographic data. The independent t-test, the one-way ANOVA, the Pearson product-moment correlation coefficient, and the multiple regression analysis were used in the analysis using IBM SPSS 26.0. The level of statistical significance was set at $P < 0.05$ for all the statistical analyses (EDAHT111001).

Results

The study suggested that the effects of people with obesity on the quality of factors were economy, body image, and depression, and predicted a 39% variation in the life of quality. We found economic status and chronic diseases were worse for people with obesity, whose related body image and depression were terrible. Overall, the quality of life was low scores. Instead, it was high scores.

Conclusion

The data showed that obesity could cause people with obesity to suffer from many chronic diseases and poor economic status, negatively affecting life quality and psychological health. The results will as about the study of bariatric surgery reference in Taiwan.

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THE EFFECTS OF BARIATRIC-METABOLIC SURGERY ON VITAMIN B12 STATUS. OUR EXPERIENCE OF 105 CASES

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Background

Numerous studies have demonstrated that bariatric-metabolic surgery is an effective therapy for severe obesity to ensure a prolonged weight loss over time in subjects suffering from severe obesity. Despite the excellent results, it is important to highlight the potential risks of developing nutritional deficiencies.

Objectives

To observe the trend of plasma concentrations of vitamin B12 in severely obese subjects undergoing bariatric-metabolic surgery who have been prescribed a standard sublingual supplement.

Methods

The study involved five Italian Centers. 105 subjects were enrolled with mean age of 47 ± 10 [21-68] years, mean weight 109.2 ± 22.2 [50-206] kg, mean BMI 40.81 ± 6.3 [21-63] kg / m², mainly female (69.5%), who underwent three different types of bariatric surgery. Of this cohort, 51.5% of subjects underwent gastric bypass (BPG), 35.2% with sleeve gastrectomy (SG), and 13.3% mini-gastric bypass. At the time of enrollment (T0), various blood chemistry parameters were detected, including serum vitamin B12, anthropometric data and food history (recall 24h). The subjects began treatment of 1000 mcg of sublingual vitamin B12 administered once a week, according to the guidelines, to avoid any deficiencies secondary to surgery and with the aim of maintaining the serum values within the normal range.

Results

Taking into consideration all the subjects involved in the study, at T0 the measured serum of vitamin B12 value was 380.00 ± 192.09 pg / ml [115-1310]. Compared to the total number of subjects enrolled in the study, 73 reached T1 and the serum vitamin B12 values after 6 months of sublingual supplementation of 1000 mcg of vitamin B12 stood at 430.00 ± 185.70 pg / ml [180- 978]. 65 subjects concluded the study and data collected at T2 indicate a serum vitamin B12 value of 512.00 ± 209.53 pg / ml [126-1253].

Conclusion

Nutritional knowledge and the correct management of medical dietary follow-up are the key aspects for the prevention and treatment of any deficiencies in subjects undergoing bariatric surgery.

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THE EFFICACY AND SAFETY OF LAPAROSCOPIC SLEEVE GASTRECTOMY PLUS JEJUNOJEJUNAL BYPASS VS LAPAROSCOPIC SLEEVE GASTRECTOMY IN OBESE PATIENTS

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Background

Laparoscopic sleeve gastrectomy plus jejunojejunal bypass(LSG+JJB) was reported to offer better weight loss in patients with body mass index(BMI) ≥ 35 kg/m² in short-term follow-up. Nevertheless, the current researches were limited to single center with small sample size.

Objectives

To conduct a multicenter cohort study comparing the efficacy and safety of LSG+JJB with Laparoscopic sleeve gastrectomy(LSG) and Laparoscopic Roux-en-Y gastric bypass (LRYGB) during a 1-year follow-up in patients with BMI ≥ 35 kg/m².

Methods

Participants of this retrospective and multicenter cohort study were extracted from the patients from seven bariatric centers between January 2015 to September 2021. Propensity score matching (PSM) was used to minimize bias, and each patient in the LSG+JJB group was matched 1:1 to the patients in the LSG group and LRYGB group with

the closest propensity score (The matching tolerance is 0.01). The primary endpoint was weight loss defined by percentage of excess weight loss (EWL. The secondary outcomes are Total weight loss rate (TWL%). Changes in weight, BMI, complications, and adverse events were also assessed.

Results

In total, 459 patients completed one-year follow-up in this study. Finally, 122 pairs of patients who received LSG+JJB and LSG and 62 pairs of patients who received LSG+JJB and LRYGB were matched to compare the efficacy and safety. At the end of the first year, LSG+JJB did not show better weight loss effect to LSG in EWL (84 \pm 22 vs 88.6 \pm 20.6, P= 0.104) and TWL (34 \pm 8.3 vs 34.9 \pm 8.4, P= 0.435), and exhibited the similar results in comparison with LRYGB with EWL (81 \pm 17.8 vs 77.5 \pm 31.2, P=0.453) and TWL (33.9 \pm 7.2 vs 31.9 \pm 13.3, P= 0.297). But regarding to hypoglycemia, LSG+JJB exhibited less postoperative complications than LRYGB(4.8% vs 22.6%, P=0.007) .

Conclusions

In short-term follow-up, LSG + JJB did not offer better weight loss than LSG or LRYGB. LSG + JJB resulted in less hypoglycemia complication than LRYGB.

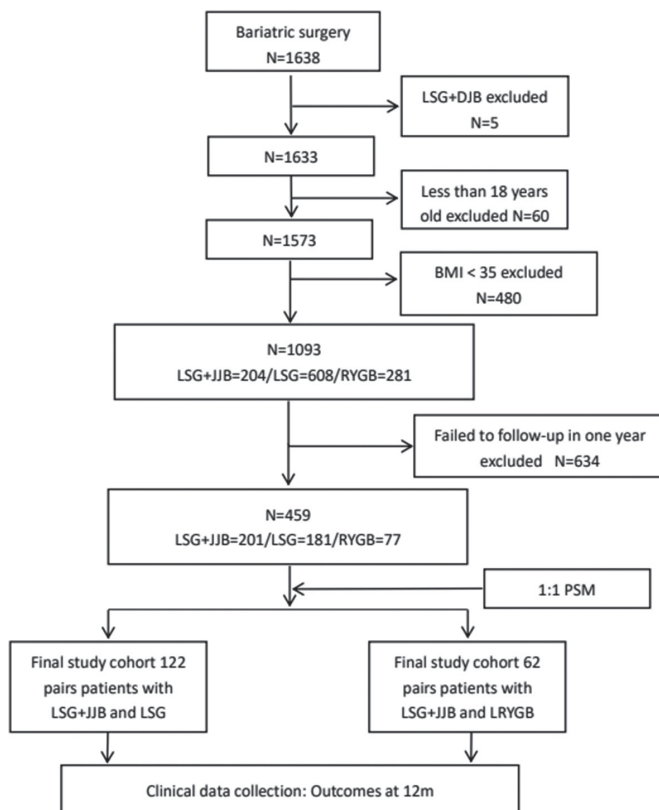


Figure 1. Flowchart of Obese patients treated with LSG+JJB and propensity score-matched patients underwent LSG and RYGB, DJB, Duodeno jejunal bypass; BMI, body mass index; PSM, propensity score match.

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THE EFFICACY OF ORAL CONTRACEPTIVES IN REPRODUCTIVE-AGED WOMEN AFTER BARIATRIC METABOLIC SURGERY

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Background

Bariatric-metabolic surgery (BMS) is widely implicated in people with obesity, since that it offers great possibilities of weight loss and improvement of comorbidities. Women with obesity often present with an altered reproductive hormone pattern and, consequently, infertility. An increasing percentage of subjects who undergoes BMS is represented by women in childbearing age, whose fertility could be partially or totally reversed. However, guidelines recommend avoiding pregnancy for at least 18 months after surgery, due to possible risks for foetus' health, after rapid weight loss, experienced by mother. So, it is highly suggested to carefully consider the use of safe contraceptive methods, given that BMS can be responsible for decreased efficacy of oral contraceptives (OCs), causing unplanned pregnancies.

Objectives

The purpose of the study was to evaluate the decrease of OCs efficacy in post-bariatric women, depending on types of surgery performed and to resume the safest contraceptive options, conforming to recommendations.

Methods

We reviewed literature, available to date, including specific guidelines and consensus statements, regarding BMS and the use of contraceptives, with a regard to the most recent studies.

Results

Studies analysed contraceptive methods, as follows: IntraUterine Devices (Cu-IUD and LNG-IUD), implants (subcutaneous etonogestrel), injectable (Depot-MedroxyProgesterone Acetate, DMPA), Progestin-Only-Pills, Combined Hormonal Contraceptives (Combined Oral Contraceptive, or COCs, transdermal patch, vaginal ring). While there is no reason to restrict non-oral contraceptive methods regardless of the type of surgery, malabsorptive and combined surgeries have been shown to negatively influence OCs efficacy, as they affect drugs absorption. Less is known about restrictive surgeries, even if most of the studies support no contraindications to use OCs, since that the advantages of the method outweigh its risks. One study detected also the use of emergency contraceptives, confirming that there is no contraindication after restrictive surgeries, while the method is not recommended after BMS involving malabsorption. According to recent research, a contraceptive pre- and post-bariatric counselling is useful to assess the best contraceptive choice.

Conclusion

Regarding the type of BMS, some contraceptives may result less efficient. Patients should be informed about risks of being pregnant 1-2 years postoperatively and recommended to use the safest method of contraception.

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THE GROWTH OF AMBULATORY BARIATRIC SURGERY IN CHINA: THE UNHURRIED GROWTH WHILE MAINTAINING QUALITY CONTROL

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Background

Ambulatory bariatric surgery has been widely carried out in western countries. The research results of the MBSAQIP Ambulatory Surgical Center (ASC) pointed out that 97% of bariatric patients were classified as low-risk patients, and ambulatory bariatric surgery can be considered. Furthermore, the MBSAQIP study revealed that ambulatory bariatric surgery does not increase the incidence of postoperative complications, reoperation rate and readmission rate.

Objectives

While ambulatory bariatric surgery has been widely carried out in western countries, the development of ambulatory bariatric surgery in China has rather taken a slower path, with less data available. Therefore, this study aimed to explore the feasibility and safety of ambulatory sleeve gastrectomy (SG) on Chinese patients.

Methods

The data of 90 bariatric patients with BMI ≤ 40 who underwent SG in our hospital, from August 2020 to August 2021 were analyzed retrospectively. Among them, there were 43 cases of ambulatory surgery (ambulatory group) and 47 cases of non-ambulatory surgery (non-ambulatory group). The clinical data of the two groups, such as operation time, hospitalization time, hospitalization cost, complication rate and percentage of excess weight loss after operation (% EWL), were compared and analyzed.

Results

The total hospital stay (1.9 ± 0.3 vs 4.5 ± 2.4 days, $P < 0.01$) and postoperative hospital stay (0.9 ± 0.2 vs 1.5 ± 0.7 days, $P < 0.05$) in the ambulatory group were significantly shorter than those in the non-ambulatory group, respectively. The total hospital expenses were significantly lower in the ambulatory group than those in the non-ambulatory group (5964.4 ± 332.1 vs 7248.4 ± 725.7 \$US, $P < 0.01$). There was no significant difference between the two groups in the incidence of postoperative complications, readmission rate and % EWL at the 6th and 12th month after operation ($P > 0.05$).

Conclusion

Through strict selection of indications and active preoperative preparation, ambulatory SG can be carried out safely and effectively, which can significantly shorten hospital stay, reduce hospital costs, and do not increase the incidence of complications. However, ambulatory bariatric procedure should be performed in high-centric institution with adequate knowledge and skills in managing bariatric patients.

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THE IMPACT OF THE COVID-19 PANDEMIC ON THE EMOTIONAL HEALTH OF BARIATRIC PRESURGICAL CANDIDATES

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Background/Introduction

The COVID-19 pandemic saw rises in depression, anxiety, substance use, trauma, and suicidality in the US population. Understanding the impact on bariatric candidates' emotional health, perceived distress and self-weight management is critical in determining suitability for surgery, and establishing appropriate supports.

Objectives

To examine differences in reported psychological symptoms, lifestyle changes and locus of control across three time periods (pre-pandemic, pandemic, post-pandemic). Post-pandemic was defined as when the masking mandate was lifted in NYC.

Methods

Subjects included 741 presurgical bariatric candidates (336 pre-pandemic, 246 pandemic, and 159 post-pandemic) who underwent a psychosocial evaluation at our institution (Feb 2014-Feb 2023). Dependent measures included the Beck Depression Inventory-II, Beck Anxiety Inventory, Multidimensional Health Locus of Control and lifestyle questions. ANOVAs and post-hoc Tukey HSD tests compared measure summary scores by evaluation time and multiple regressions by timepoint.

Results

Sample was 47.9% White, 25.2% Hispanic, 25.2% Black, 1.6% Asian and 0.1% Pacific Islander, and 75% female. Pre-pandemic subjects were slightly older, with more males. Depressive and anxious symptoms increased at each timepoint, with statistically significant differences between pre- and post-pandemic depression ($p=.016$), and pre- and post-pandemic anxiety ($p<.001$). Internal locus of control decreased post-pandemic compared to pre-pandemic ($p=.017$). Presurgical BMI increased across all timepoints, with significant differences between pre- and post-pandemic, ($p<.001$), and the pandemic and post-pandemic timepoints ($p=.029$). On multiple regression age, gender, depression, and number of presurgical changes were predictive of presurgical BMI pre-pandemic [$F(6,240)=3.144$, $p=.003$]. During the pandemic, age, gender, race, and depression were predictive of BMI [$F(6,152)=4.594$, $p<.001$]. The post-pandemic regression model was not significant.

Conclusion

The pandemic increased depressive and anxious symptoms in surgery candidates, decreased the likelihood of making pre-surgical behavior changes, and decreased internal locus of control. Results indicate that this is a cohort that requires a great deal of support and may be differentially affected by social isolation and health related fears.

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THE INCIDENCE OF SPONTANEOUS INTRA-THORACIC SLEEVE MIGRATION AFTER SLEEVE GASTRECTOMY; A RETROSPECTIVE REVIEW

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Background

With the accumulation of clinical experience after the introduction of laparoscopic sleeve gastrectomy (LSG) as a primary metabolic bariatric procedure, De novo or persistent gastro-esophageal reflux disease (GERD) has become a chronic complication of interest. Among the causes of GERD, spontaneous intra-thoracic sleeve migration (ITSM) of the sleeve has become an under mentioned yet increasingly significant chronic complication with an incidence of 5 to 10% that may require surgical management.

Objectives

The aim of this study is to evaluate the incidence of spontaneous ITSM from our center in correlation with preoperative and postoperative symptoms of GERD with endoscopic and findings from a non-enhanced computed tomography CT and percentage of patients requiring surgical revision.

Methods

A retrospective chart review of 52 patients who had undergone LSG at our center from 2019 to 2021 was done. A non-enhanced CT scan was performed in cases of symptoms of persistent GERD or as a routine 1-year follow up in these patients in order to diagnose spontaneous ITSM. Patient characteristics including history of smoking and pre and postoperative symptoms of GERD were compared.

Results

The incidence of spontaneous ITSM was 13.5% (n=7, total n=52). The mean interval to diagnosis was 14.7 ± 8.3 months. Twenty-seven patients (51.9%) had symptoms of persistent GERD while 6 patients (85.7%) with ITSM had symptoms. Three patients (50%) from the ITSM group had been smokers before and after surgery. One patient required repair of hiatal hernia but is currently still dependent on acid reducing medication (ARM).

Conclusion

Surgeons practicing LSG should be aware of the high incidence of ITSM when discussing procedure selection with patients with thorough preoperative evaluation of preexisting of GERD. Routine evaluation with non-enhanced CT should be considered when persistent GERD is suspected as surgical management may be required for ITSM.

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THE MINDFULNESS-BASED COGNITIVE BEHAVIORAL THERAPY FOR TREATING SIGNIFICANT WEIGHT REGAIN AFTER ROUX-EN-Y GASTRIC BYPASS

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Background

Bariatric surgery is known as the most effective treatment for severe obesity and related chronic diseases. [1] Roux-en-Y gastric bypass (RYGB) is one of the most common procedures performed to achieve sustainable weight loss. However, studies with long-term follow-up after RYGB present a rather high percentage of weight regain (WR) [2].

Objective

The aim of this study is to evaluate holistic approach: cognitive behavioral therapy (CBT), mindfulness approach with lifestyle modification, for WR therapy.

Methods

This study included 20 patients (age ≥ 18 years) who underwent RYGB surgery in 2010-2013 and experienced a significant %WR (62,71 (32,43)). Twelve weekly CBT, mindfulness sessions combined with lifestyle modification (diet, physical activity) were conducted for ten study participants. Intervention for the control group (n=10) was nutritional training and physical activity. Patients were asked about weight changes over the years, and the food frequency questionnaire (FFQ) as well as food addiction scale were used to evaluate eating behaviour.

Results

Average weight loss in CBT group (n=8) was 8,13 (4,19) kg, meanwhile in control group (n=6) - 3,5 (4,28) kg, $p=0,066$. CBT participants significantly reduced calorie amount: median from 2398,34 (1319,14 – 3589,93), (basal energy expenditure (BEE) median 1654,52 (1611,91 – 1877,27) kcal/d), up to 1185,03 (921,63 – 1494,68) kcal/d, $p=0,02$. Control group respectively from 1732,69 (1445,09 – 2230,59) (BEE – 1782,03 (1632,53 – 1947,90)) up to 1649,36 (1217,68 – 1971,47) kcal/d, $p=0,54$. There were 3 patients in CBT groups with severe food addiction: 1 participant did not finish the course, and 2 study participants' scores decreased to mild food addiction, $p=0,007$.

Conclusion

There was no significant difference in weight loss between the groups, however, it was found that patients after CBT significantly reduced intake of calories. Thus, more extensive studies should be done to evaluate the long-term impact of CBT among patients with WR after RYGB.

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THE OUTCOMES OF REVISIONAL ONE ANASTOMOSIS GASTRIC BYPASS VERSUS REVISIONAL ROUX-EN-Y GASTRIC BYPASS AFTER PRIMARY RESTRICTIVE PROCEDURES

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Background

Failed restrictive procedures are usually managed with conversion to another bariatric procedure. Our aim was to evaluate one-anastomosis gastric bypass (OAGB) as a revisional option for failed restrictive procedures. In addition, we compare the outcomes of OAGB versus Roux-en-Y gastric bypass as a revisional bariatric procedures.

Material and Methods

The current series is a prospective study, from May 2009 to December 2016. A total of 348 patients with failed restrictive bariatric operations underwent laparoscopic revisional gastric bypass. Revisional OAGB was performed in 243 patients and revisional Roux-en-Y gastric bypass in 105 patients. The demographic data and outcomes were studied by our multidisciplinary team.

Result

By the end of the study, the mean age was 39.3 – 10.3 years with body mass index of 37.5 – 9.2 kg/m². At 2-year follow-up, the overall intractable reflux (Symptom-Severity score questionnaire >4) was significantly higher after revisional OAGB (21.4%). The reflux with scoring ≥4 was significantly higher in the vertical band gastroplasty than laparoscopic adjustable gastric band and laparoscopic gastric sleeve (25.2%, 16.9%, and 14.3%, respectively).

Conclusion

Although laparoscopic revisional OAGB is a feasible and safe option after failed restrictive procedures, it has a higher chance of reflux in long-term follow-up.

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THE PHASE ANGLE AS PREDICTOR OF WEIGHT LOSS IN ENDOSCOPIC GASTROPLASTY: PRELIMINARY RESULTS FROM A SINGLE CENTER, RANDOMIZED STUDY

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Background

Three different Endoscopic Gastroplasty (EG) techniques are mainly reported in literature: endoscopic sleeve gastroplasty (ESG), endoluminal vertical gastroplasty (EVG), and distal primary obesity surgery endoluminal (POSE-2).

Objectives

Our study aimed to assess biometrical parameters which could predict changes in weight loss at 6 months follow-up after EG.

Methods

This was a single center, randomized study (ClinicalTrials.gov NCT04854317) of patients who underwent EG (through ESG or EVG or POSE-2) for the treatment of obesity. Outcomes included the efficacy of the three EG procedures at inducing weight loss, measured by the percentage of Total Body Weight Loss (%TBWL) and Excess Weight Loss (%EWL).

Results

Between July 2020 and October 2021, 90 obese (mean BMI 36.6 kg/m²) patients (mean age 46 y; females 87.5%; main obesity class: II in 58.3% cases; main comorbidity: hepatic steatosis in 70% cases) underwent EG through ESG or EVG or POSE-2. At 6 months, 70% patients attended their follow-up visit. They experienced 16% TBWL and 39.7% EWL, with no significant difference among the three techniques in both of parameters ($p > 0.62$ in TBWL and $p > 0.94$ in EWL ANOVA tests); 95.2% patients achieved at least 5% TBWL, and 85.7% achieved at least 25% EWL. All the body circumferences homogeneously decreased ($p < 0.001$). By a linear regression analysis, a significant correlation between the Phase Angle and the %TBWL ($p < 0.05$) and %EWL ($p < 0.05$) was detected.

Conclusion

Our study confirms that ESG, EVG and POSE-2 are valuable EG procedures to reduce weight in obese patients. The Phase Angle could be considered a useful predictor of weight loss after the EG, at least in the short-term.

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THE PREVALENCE OF METABOLIC SYNDROME AMONG IRANIAN POPULATION WITH SEVERE OBESITY PRE AND POST- BARIATRIC AND METABOLIC SURGERY

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Background

Metabolic syndrome (MetS), as multiple obesity-related comorbidities, has highly prevalent worldwide due to elements contributing such as abdominal obesity, for this reason, bariatric and metabolic surgery (MBS) as effective treatment option to control MetS was suggested.

Objectives

This retrospective cohort study was therefore carried out to clarify the real prevalence of MetS among severe obesity people before and after the three main bariatric procedures (One-anastomosis gastric bypass (OAGB), Roux-en-Y gastric bypass (RYGB), and sleeve gastrectomy (SG)).

Methods

All adult people with obesity who had underwent MBS and their information were registered in Iranian National Obesity and Metabolic Surgery database (INOSD) from 2009 to 2017 were enrolled. The presence of MetS at 6-, 12-, and 24-months post-operative follow-up was determined based on Joint Interim Statement criteria.

Results

Of the 1111 participants, 918 (82.6%) were women and 193 (17.4%) were men with average age of 39 and BMI between 45 to 46 kg/m². Of which, 678 (61%) patients performed OAGB, 363 (32.7%) underwent RYGB, and SG was done on the remaining 70 (6.3%) patients. The prevalence of MetS was approximately 68.8% among the patients (RYGB = 68%; OAGB = 69.8%; SG = 62.9%), with no significant differences between the three groups (P = 0.463). In terms of pre-existing comorbidities associated with MetS, SG patients had a lower baseline FBS (P = 0.47). We found no significant trend in the resolution of MetS of each treatment group (RYGB = 23%; OAGB = 24%; SG 35%) at 6 months follow up MBS, (RYGB = 23%; OAGB = 24%; SG 35%) at 12 months after surgery and (RYGB = 22.2%; OAGB = 18%; SG 30%) at 24 months' post-operative) (P_{between groups} = 0.169).

Conclusion

Our observations revealed the beneficial effects of the 3 main MBS procedures in reducing MetS prevalence; although there was existed no considerable difference in terms of type surgery method on MetS trend over the follow-up period of each treatment group.

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THE PREVALENCE OF OBESITY HYPOVENTILATION SYNDROME IN THE SUPER-SUPER-OBESE (BODY MASS INDEX >60) AWAITING BARIATRIC SURGERY

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Obesity is a risk factor for Obesity Hypoventilation Syndrome (OHS). Therefore, the highest prevalence may occur in the heaviest individuals. Bariatric surgery is recommended for adults with a body mass index (BMI) >35kg/m².

Objective

The aim was to determine the prevalence of OHS in the super-super-obese (BMI>60kg/m²) awaiting bariatric surgery, and to record post-operative outcomes.

Methods

A retrospective review of patients undergoing bariatric surgery from July 2008 to December 2022. Patients were selected if a BMI>60kg/m² was recorded at surgery date. Data collected included age, gender, BMI, sleep study parameters, type of surgery, and post-operative outcomes.

Results

A BMI>60kg/m² was reported in 75 of 872 (8.6%) patients at time of surgery; 74.7% female, age 44.3 (range 21 – 66) years. Obstructive Sleep Apnoea was present in 60 (92%) patients [35 (58%) with AHI>30] and OHS reported in 3 (4%). Sleep studies were mainly polygraphy (95%), no overnight capnometry, arterial blood gas analysis in 8 (10.7%), and echocardiogram in 100% [2 (2.7%) had an elevated pulmonary artery pressure (>25mmHg)]. Sleeve gastrectomy was performed in 54 (72%), the remainder had a gastric bypass. The median length of stay was 4 days (range 3 to 24 days). Repeat sleep studies were recorded in 22 (29.3%) 6 months post-operatively and AHI improved from 50.4 (30.7) to 17.1 (4.7) [mean(SD)]. Positive Airways Pressure was discontinued in 86% following surgery.

Conclusions

OHS was likely under-diagnosed in this super-super-obese group although screening was inadequate. However, there were few post-operative complications with resolution of Sleep disordered breathing in the majority.

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THE PSYCHOLOGICAL BENEFITS OF BARIATRIC SURGERY BEYOND 2 YEARS POST-OPERATIVE

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Introduction

Obesity is associated with increased anxiety and depression, and poor quality of life. Although bariatric surgery results in significant weight loss and improvement in comorbidities, the long-term psychological benefits are poorly understood.

Objectives

To determine the impact of bariatric surgery on psychological outcomes and to identify a subgroup of patients that might benefit from greater psychological input.

Methods

Patients undergoing bariatric surgery completed detailed psychological questionnaires pre-operatively and at 24 months post-operatively. Patient questionnaires included quality of life (QoL), Beck Depression Inventory II (BDI-II), and Hospital Anxiety and Depression Scale (HADS). Changes in weight were assessed by body mass index (BMI) and percent weight loss. Statistical analyses were performed using Mann-Whitney U test and Pearson's correlation coefficient test.

Results

Between June 2008 and January 2018, 625 patients were enrolled in our study. The mean (SD) age was 49(7.43) years, 76% were female. 69% (n=427) underwent gastric bypass (LGBYP). Pre-operatively, 22.3% (n=139) were diabetic, 37.8% (n=235) were hypertensive, and 10.9% (n=68) were smokers. BMI reduced from 49(7.43) kg/m² to 24(16.0) kg/m² by 2 years following surgery (p<0.0001). QoL score improved from 8.00(1.63) pre-operatively to 9.00(1.40) at 24 months (p<0.0001). BDI-II reduced from 12.0(9.19) to 6.00(7.86) (p<0.0001). HADS score reduced from 6.00(4.65) to 3.00(3.64) (p<0.0001). There was no correlation between percent weight loss and QoL, BDI-II, or HADS (p>0.05). Likewise, surgery-type, presence of diabetes, hypertension, smoking, age ≥50 years, and BMI ≥50 kg/m², did not influence any of the scoring systems (p>0.05).

Conclusion

Bariatric surgery results in long-term psychological benefits. It was not possible to identify a subgroup of patients based on age or medical co-morbidity that would benefit from greater psychological input.

Table 1. Participant Demographics and Summary of Findings.

VARIABLE	PARTICIPANTS (N=622)	
Female sex; n(%)	474(76.2)	
Age; mean(SD) (years)	49(7.43)	
Weight; mean(SD) (kg)	137(25.8)	
Smoking; n(%)	68(10.9)	
Diabetes; n(%)	139(22.3)	
Hypertension; n(%)	235(37.8)	
Surgery type; n(%)		
	Bypass	427(68.6)
	Sleeve	192(30.9)
	Lap band	3(0.48)
BMI; mean(SD)		
	Pre-operative	49.0(7.43)
	24 months	24.0(16.0)
QoL; mean(SD)		
	Pre-operative	8.00(1.63)
	24 months	9.00(1.40)
BDI-II; mean(SD)		
	Pre-operative	12.0(9.19)
	24 months	6.00(7.86)
HADS; mean(SD)		
	Pre-operative	6.00(4.65)
	24 months	3.00(3.64)

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THE RATIO OF COMMON LIMB AND TOTAL SMALL BOWEL LENGTH IN SINGLE ANASTOMOSIS DUODENAL-ILEAL BYPASS WITH SLEEVE GASTRECTOMY

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Background

Single anastomosis duodenal-ileal bypass with sleeve gastrectomy can offer a greater weight loss and improvement of comorbidities, but it has the drawback of inducing a higher rate of nutritional deficiencies and malnutrition. It is necessary to find a balance between sufficient weight loss and low risk of possible nutritional deficiencies.

Objectives

The total bowel length (TBL) is quite different between individuals. If the position of the duodenal-ileal anastomosis is only determined according to a fixed intestinal length without considering the length of TBL, the common limb (CL) could be relatively too short to bring about nutritional deficiency or too long to cause unsatisfied weight loss.

Methods

Two cases of bowel reconstruction after re-sleeve gastrectomy with single anastomosis duodenal ileal bypass (RS-SADI) for weight regain or unsatisfied weight loss following sleeve gastrectomy (SG) were reported. Bowel reconstructions were performed for these two patients.

Results

The first patient was a 28 years old female underwent her SG first and achieved a poor BMI loss 18 months postoperatively. Her weight loss was still unsatisfied after her RS-SADI procedure. Her CL was 400 cm measured from the ileocecal valve proximally when she was undergoing her CL shortening surgery. The new anastomosis was made and her CL was shortened 100 cm. Her BMI decreased from 34.2 to 25 kg/m² later. Another patient was a 35 years old female who underwent SG first. She underwent a RS-SADI procedure for her unsatisfied weight loss. Her chronic diarrhea was not well controlled with severe hypoproteinemia after the surgery. Her total bowel length was 920 cm found in her CL lengthening surgery. Her CL was lengthened from 300 cm to 420 cm. The patient had normal protein level and nutritional status two months after the surgery.

Conclusions

The possible approach for achieving the balance between optimal weight loss and malnutrition is to measure the CL/TBL ratio. In our two cases, the CL/TBL ratios were 0.5 and 0.48 respectively after their small bowel reconstructions, which could be an ideal range.

P-417

THE ROLE OF DIET INTERVENTION AS NEOADJUVANT THERAPY AND ADJUVANT THERAPY OF BARIATRIC SURGERY IN A SEVERE OBESITY CASE

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Introduction

Neoadjuvant and adjuvant therapy are very important parts of multimodal approach of gastric cancer. A lot of researches support a VLCD as a safe and effective tool for improving the surgical risk of bariatric patients. However, the quantity of free fat mass (FFM) loss is a commonly concern regarding its use.

Objectives

The aim of this study was to assess the changes in body composition undergoing diet intervention before and after BS.

Methods

We present a multimodal approach in a patient with severe obesity: a 33-year-old man with a body mass index (BMI) 77.1 kg/m² had acute left heart failure, heart enlargement, hyperuricemia and obstructive sleep apnea syndrome (OSAS). A calorie restricted diet (CRD) followed by a very-low-calorie-diet (VLCD) with protein intake 70g/day were given as neoadjuvant therapy before surgery. Then he got a sleeve gastrectomy. Diet adjuvant therapy after surgery including remodel of eating behavior, dietary counselling, VLCD followed by a low-calorie-diet (LCD) with protein intake 70g/day. Body composition tests (Inbody770) and cardiac ultrasonography were taken before and after surgery at different times.

Results

After three months neoadjuvant diet therapy, the weight reduced from 228kg to 186.7kg (%EWL 26.81%). The free fat mass (FFM) was 86kg. The left ventricular ejection fraction (LVEF) improved from 50% to 63%. With eighteen months adjuvant diet therapy after sleeve gastrectomy, the weight was of 92kg (%EWL 88.22%) with a BMI 33 kg/m². The FFM was 72.5kg and skeletal muscle was 38.3kg, both reduced slightly. The FFM loss accounted for total weight loss was 25%. The LVEF increased to 71%.

Conclusion

Diet neoadjuvant therapy before BS is benefit for rapid weight loss, reducing surgical risk and greater rate of postoperative EWL in patients with severe obesity. Diet adjuvant therapy after BS is in favor of remodeling eating behavior, maximizing the effects of the BS, reducing the risk of late weight regain and maintaining the amount of FFM. Diet intervention is a crucial part in the multimodal approach of obesity treatment.

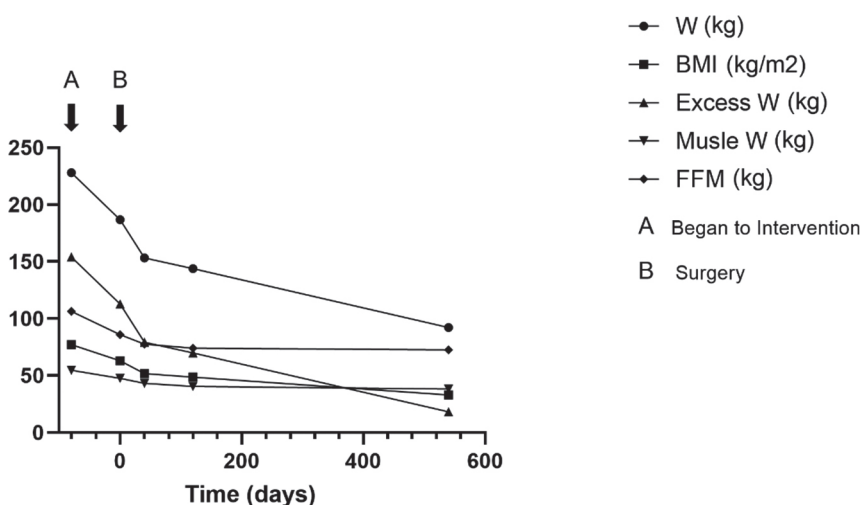


Fig. 1.

P-418

THE SEVERITY OF NAUSEA AND VOMITING AFTER SLEEVE GASTRECTOMY AND SINGLE ANASTOMOSIS SLEEVE ILEAL BYPASS BASED ON RHODES INDEX EVALUATION

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Background

Sleeve gastrectomy with single anastomosis sleeve ileal bypass (SASI) is a relatively new procedure and have the potency to reduce the high sleeve pressure of the stomach, and thus, reducing the severity of PONV postoperatively.

Objectives

However, at present, there is no study to compare the occurrence of PONV after sleeve gastrectomy (SG) and SASI. In this study, we compare the severity of PONV (using Rhodes Index) between SG and SG-SASI procedures.

Methods

We prospectively collected the data of patients undergoing bariatric surgery in our hospital from June 2022 to December 2022. PONV questionnaire survey (Rhodes Index) were recorded on the day after surgery, postoperative day (POD) 1, and POD 2.

Results

A total of 200 patients (SG, n=100 and SASI, n=100) were included. The total score of Rhodes in SG group was higher than that in SASI group (SG 26.6 ± 13.5 vs. SASI 16.1 ± 11.3 , $P < 0.0001$). The Rhodes score of females in both groups was higher than that of male (SG female 29.37 ± 13.38 vs. male 21.38 ± 9.95 , $P = 0.6146$; SASI female 18.11 ± 10.69 vs. male 11.58 ± 11.27 , $P = 0.0080$).

Conclusions

Based on Rhodes index evaluation, patients following SASI procedure were likely to have lower severity of PONV when compared with SG procedure.

Rhodes Scores

	SG (n=100)	SASI (n=100)	P-value
POD 01	14.25±6.10	9.21±5.57	0.0000
POD 02	8.7±5.20	5.2±4.45	0.0000
POD 03	4.1±3.00	2.1±2.27	0.1019
Total	26.56±13.54	16.06±11.28	0.0000

SG group Rhodes Score

	Female (n=70)	Male (n=30)	P-value
POD 01	15.21±6.03	12±5.85	0.0168
POD 02	9.6±5.62	6.45±3.04	0.0054
POD 03	4.56±3.14	2.93±2.28	0.0133
Total	29.37±13.38	21.38±9.95	0.6146

SASI group Rhodes Score

	Female (n=76)	Male (n=24)	P-value
POD 01	9.98±5.34	6.75±5.69	0.0123
POD 02	5.88±4.55	3.17±3.45	0.0084
POD 03	2.25±2.38	1.67±1.86	0.2753
Total	18.11±10.69	11.58±11.27	0.0080

P-419

THROMBOSIS OF THE SUPERIOR MESENTERIC VEIN AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY – A RARE BUT SEVERE COMPLICATION

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Background

Bariatric surgery is the most effective treatment for patients with obesity. Laparoscopic sleeve gastrectomy (LSG) is the most performed bariatric procedure worldwide and associated with a low complication rate. Besides the most reported severe complications, i.e. bleeding and staple line leak, thrombosis of the superior mesenteric vein (SMV) may be a rare but life-threatening complication after bariatric surgery.

Case Report

A 33-year-old female patient, BMI 51,8 kg/m², underwent an uneventful LSG at our center for bariatric and metabolic surgery in Germany. 70mg enoxaparin once daily was given as prophylactic anticoagulation until discharge. After an uneventful postoperative course and discharge at postoperative day 3, the patient presented 9 days later with epigastric and back pain in the emergency room. The CT scan showed thrombosis of the SMV. After thrombectomy of the SMV, several abdominal washouts, creation of a laparostoma and highly complex treatment at the intensive care unit the patient was discharged 8 weeks after revisional surgery.

Discussion

This patient was the first and only patient presenting with an acute thrombosis of the SMV after more than 2400 procedures performed in our reference center for bariatric and metabolic surgery since 2011. The incidence is low, but mortality is described as high as up to 50%. In the literature, only case reports and small series are reported. The discussed causes and managements are variable and depend on the patients' situation. Although thrombosis of the SMV is a rare complication after bariatric surgery, it should be considered or ruled out, if a patient presents with abdominal pain after a recently performed bariatric procedure. Surgery should be performed and therapeutic anticoagulation be started, both immediately. Even if risk factors for thromboembolic events are unknown, every bariatric surgeon should be aware that patients with obesity are at risk.

P-420

TO REPORT THE WEIGHT LOSS OF PATIENTS UNDERGOING INTESTINAL TRANSIT BIPARTITION IN THE FIRST SURGICAL PROCEDURE

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Background

Estimates show that, in 2025, Brazil will be the fifth country in the world to have obesity problems in its population. This increase is occurring in both sexes, regardless of social class or cultural level. According to the WHO, the number of obese people between 1995 and 2000 increased from 200 to 300 million, making up almost 15% of the world's population.

Summary

Goal. To report the weight loss of patients attended to the Intestinal Transit Bipartition in the first emergency time, associated with a discussion on the literature on the subject.

Method

Descriptive study in a general and bariatric surgery service. In order to encourage discussion on the subject, an integrative literature review was carried out based on the collection of scientific articles in the MEDLINE (via PubMed) and SciELO databases.

Results

The study evaluated the weight loss of patients with SO, with a BMI in the range of 60 kg/m², and aged between 20 and 65 years, clarified to the pediatric ITP procedure. Although associated with good results and post-surgical quality of life in the first period, the estimated weight loss in the first period was 30%.

Conclusion

There is still no way to assess whether the weight loss by stages of the BTI procedure is satisfactory, as most studies are limited, but there was a 30% weight loss and remission of symptoms and improvement in quality of life after completion of the BTI surgery.

P-421

TO STUDY THE CORRELATION BETWEEN PREOPERATIVE PSYCHOLOGICAL PREDICTORS FOR COMPLIANCE IN POSTOPERATIVE LONG-TERM OUTCOMES AMONG BARIATRIC PATIENTS

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Background

Bariatric surgery is considered the most effective treatment of Obesity and associated chronic diseases, each bariatric patient's journey is different and so is the outcome. The outcome of Bariatric surgery depends on the patient's acceptance, adaptation and compliance level.

Objective

The study aimed to observe the correlation between preoperative psychological predictors for compliance in postoperative long-term outcomes among bariatric patients.

Method

A sample of 153 post-bariatric males (n=60), and females (n=90) was taken for this study. Detailed Pre-operative psychological assessment including, history taking, mental Status Examination, Beck Depression Inventory, General Anxiety Disorder Scale and level of self-care to assess the level of compliance in terms of physical activity, diet, supplements and de-addiction. And post-operative compliance using Eating Behaviour After Bariatric Surgery Questionnaire was used as a measuring tool to observe the significance of preoperative compliance. r- Karl Pearson's correlation method was used for statistical analysis.

Result

The result indicates a significant relationship between preoperative psychological reports and patients' journey over the year.

Conclusion

Pre-operative psychological evaluation plays an important role in post-operative patient care.

P-422

TOUPET SLEEVE VIDEO/SURGICAL TECHNIQUE AND SHORT TERM RESULTS**Bent Johnny Nergård** - Carl Fredrik Schiou*Aleris Hospital, Dept. of Surgical Gastroenterology, Oslo, Norway*

Can sleeve gastrectomy or SASI combined with partial fundoplication reduce reflux disease in obesity patients?

Roux-en-Y Gastric bypass (RYGB) has been the procedure of choice for treatment of hiatal hernia or GERD in conjunction with obesity.

But due to late complications and side effects, other methods such as Nissen fundoplication, Dor procedure and different forms of cardiopexia are raised as alternative possibilities. We present our first experience and short follow-up with partial fundoplication (modified Toupet procedure) combined with Sleeve Gastrectomy (SG) or Singel Anastomosis Sleeve Ileal (SASI) Bipartition. All patient had crural repair.

In total 27 obesity patients (SG 16/ SASI 11) with known GERD or hiatal hernia diagnosed on gastroscopy/CT scan or preoperative findings of small to medium sized hiatal hernias are included. Operative method will be demonstrated with a short video.

16 patients (8 in each group with 1 year follow-up). Preoperative BMI for SG patients were 36,2 (31-41,7) and for SASI patients 40,5 (36,8-45,5).

EWL 1 year SG (n=8): BMI from 36,5 to 28,1 and SASI (n=8): BMI from 39,9 to 27,8. 2 out of 16 (12,5%) had asymptomatic hiatal hernia, 9 out of 16 (56,3 %) had GERD and 5 (31,3 %) had diet related reflux symptoms.

Remission of reflux disease regarding PPI medication were complete in all 9 patients 1 year after surgery. One preoperative asymptomatic patient had diet related reflux, all patients with preop diet related reflux experienced remission or improvement of reflux symptoms.

Complication: One patient had dilatation of fundoplicate, laparoscopically removed 3rd postoperative day.

Conclusion

Our preliminary short term results for combined fundoplication and SG or SASI in bariatric patients with reflux disease or hiatal hernia are promising with nearly complete remission of reflux symptoms. Early weight results are promising, especially when combining fundoplication with SASI. Complications and side effects seem rare.

P-423

TRANSFORMING HEALTH IN A SMALL BRAZILIAN TOWN: HOW METABOLIC AND BARIATRIC SURGERY CAN REDUCE COMORBIDITIES AND MEDICATION USE

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Background

The prevalence of obesity in Brazil has been increasing and is associated with multiple comorbidities. This condition results in significant public healthcare costs, including hospitalizations, medication use, outpatient procedures, and loss of work capacity. Metabolic and bariatric surgery (MBS) is an effective treatment option for obesity and associated diseases. Unfortunately, the majority of the population in Brazil cannot afford private sector surgery, and the public healthcare system only performs 9% of bariatric surgeries.

Objectives

This study aimed to investigate the effectiveness of two types of bariatric surgery, Roux-en-Y gastric bypass and sleeve gastrectomy, in achieving weight loss and resolution of comorbidities, and to explore whether MBS is a viable option to reduce public health spending in the long term.

Methods

We conducted a descriptive, cross-sectional, retrospective, and quantitative study in two hospitals in the small town of Patos de Minas/MG, Brazil. 190 patients who underwent MBS were included, with the majority being female (84.74%) and aged between 31 and 40 years (47.89%). Preoperative and postoperative information was analyzed, including weight loss at 7, 14, 45, 90, 180, and 360 days and resolution of comorbidities. We used Student's t-test to determine whether statistically significant differences existed.

Results

The study found significant differences in weight loss, decreased medication use, and remission of chronic diseases, with a 97,5% reduction in comorbidities and a 81,8% reduction in continuous medication use (Table 1). There was no significant difference between the two surgical techniques in terms of effectiveness.

Conclusion

The study highlights the importance of increasing access to MBS for those with a surgical indication to reduce comorbidities and medication use and ultimately reduce public health spending resulting from severe obesity and associated diseases. Additionally, surgical intervention for obesity positively affects quality of life.

Table 1. Comorbidities and Medication Frequency before and after Surgery.

Comorbidities	Before	After	Medication	Before	After
Hiatal Hernia	130	0	Antihypertensives	140	17
Pangastritis and Gastritis	104	0	Antidepressants	59	22
Esophagitis	98	1	Hypoglycemic	43	4
Systemic Arterial Hypertension	77	7	Inhalation devices	20	5
Depression and Anxiety	64	2	Statins	14	2
Dyslipidemia	47	2			
Diabetes Mellitus	43	2			

P-424

TRANSORAL OUTLET REVISION (TORE) VS. LAPAROSCOPIC REVISION FOLLOWING ROUX-EN-Y GASTRIC BYPASS: A US COST CONSEQUENCE ANALYSIS

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Introduction

Despite the efficacy and durability of Roux-en-Y Gastric Bypass (RYGB), the number of revisional bariatric surgeries are increasing in the United States. Dilation of the gastrojejunal anastomosis (GJA) is an anatomic contributor to weight recurrence and can be corrected with endoscopic (Transoral outlet Revision – TORe) or traditional surgical revision. Recent studies have demonstrated a lower incidence of serious adverse events with TORe compared to surgical revision post RYGB but economic evaluations are required to inform decision making.

Material & Methods

A cost-consequence model comparing TORe using a commercially available full thickness endoscopic suturing system and laparoscopic surgical revision of RYGB was developed from the United States (US) Commercial Payor perspective. The model evaluated healthcare utilization (operating room time and length of stay) and adverse event cost up to 30 days. A systematic literature review was performed to identify clinical outcomes and meta-analysis was performed. Reference costs were identified through a targeted literature search and validated by clinicians.

Results

TORe demonstrated significantly reduced costs compared to surgical revision of RYGB (\$8,348; $p < 0.01$). Cost savings were driven by a reduced OR time (34 mins vs. 98 mins) and length of stay (0.2 days vs. 1.8d ays). This resulted in cost savings of \$2,724 and \$5,015 respectively. Adverse events reported at 30 days included gastrointestinal leaks, bleeds and post-operative stenosis demonstrated modest savings of \$609.

Conclusion

TORe to manage dilation of the GJA significantly reduces short term cost compared to surgical revision and appears to be cost effective from the US commercial payor perspective. Well conducted prospective studies measuring quality of life and capturing economic endpoints are required to inform more robust models.

P-425

TRANS-UMBILICAL 2-SITE LAPAROSCOPIC ONE-ANASTOMOSIS GASTRIC BYPASS: A COMPARISON WITH CONVENTIONAL LAPAROSCOPIC TECHNIQUES

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Background

Many Single-site or single-incision laparoscopic surgery (SILS) has been reported for sleeve gastrectomy (SG) because of its outstanding performance in cosmetic effects. However, it is difficult to routinely apply SILS in relatively complex bariatric procedures, such as one anastomotic gastric bypass (OAGB).

Objectives

Here we reported a modified SILS technique, trans-umbilical 2-site technique, for OAGB.

Methods

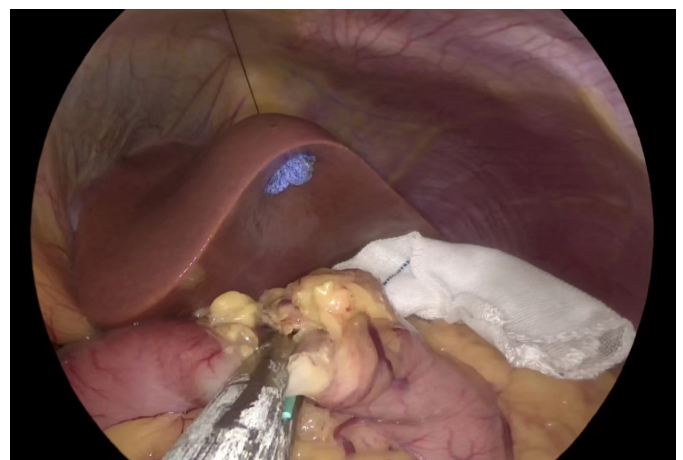
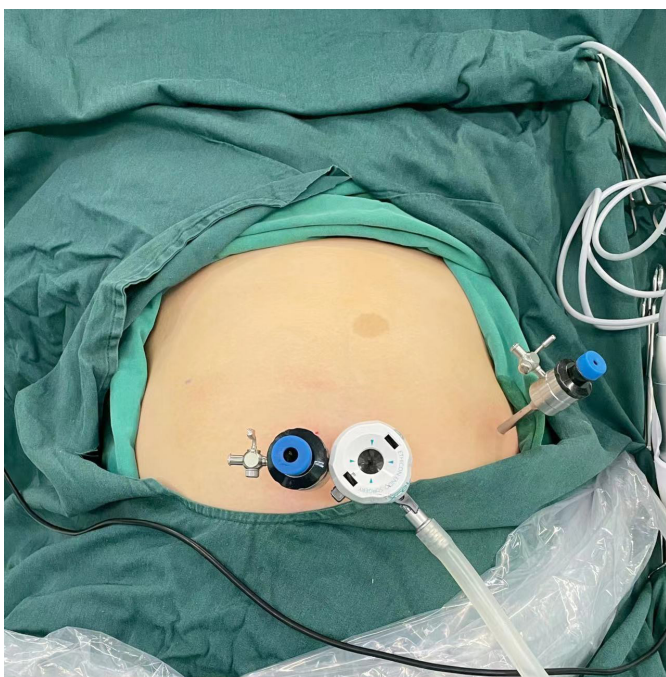
From March 2022 to October 2022, 20 consecutive patients received OAGB using the trans-umbilical 2-site technique in our bariatric/metabolic surgery center. We used the umbilical site incision to place 2 ports (12 and 10 mm) to serve as the video port and working port for the stapler. Another small skin incision was placed at a left lateral abdominal site for the 5-mm working port. Through these working channels, we could use conventional laparoscopic instruments to perform OAGB. The data of the 20 patients with 2-site OAGB procedures were compared with the data of another matched 40 patients using conventional 4 ports technique selected from the data bank our patients cohort.

Results

The mean age was 33.75 ± 7.69 years old and the mean BMI was 35.03 ± 6.47 Kg/m² of the 2-site procedures underwent OAGB. There was no significant difference of clinical characters between the two groups at pre-operation. The operation time of 2-site OAGB group was significantly longer than the conventional OAGB group (118.65 ± 20.54 vs 101.40 ± 17.27 minutes; $p=0.001$). The postoperative hospital stay and postoperative exhaust time was shorter in the 2-site OAGB group than the conventional OAGB group (2.60 ± 0.60 vs 3.77 ± 0.53 days; $p < 0.001$; 1.45 ± 0.51 vs 2.03 ± 0.16 days; $p < 0.001$). No perioperative major complication or mortality occurred in the present series. Two patients developed minor complications, separately in each group (10% vs. 5%; $p=0.464$). Cosmetic score of 2-site OAGB group was more prominent (4.85 ± 0.37 vs 4.52 ± 0.60 ; $p=0.030$).

Conclusions

site transumbilical modified SILS technique is feasible and safe for OAGB. By reducing ports, this technique has achieved excellent performance in cosmetic result and postoperative rehabilitation. We believe that it can be used as a routine surgical choice for patients.



P-426

TREATING OBESITY WITH A MULTIDISCIPLINARY APPROACH: MOVING BEYOND BMI - LESSONS FROM COLOMBIA'S FIRST OBESITY CENTER OF EXCELLENCE

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Background

Obesity is a global epidemic that requires comprehensive management strategies. In Colombia, approximately 2 out of 10 patients live with obesity. The need to address obesity with a patient-centered multidisciplinary team, with the highest standards of quality and safety, establishes the most appropriate therapeutic basis for patients.

Objectives

To evaluate the effectiveness of a multidisciplinary obesity program in a fourth-level institution in Bogotá, Colombia. Quality and safety measurements of operated patients were also assessed.

Methods

A retrospective study with a prospective data base was conducted. Patients admitted to the obesity center from August 2020 to January 2023 were included. Baseline characteristics and quality indicators of patients were evaluated. Additionally, adherence and dropout rates were assessed, as well as the evolution of body composition and cardiometabolic variables in patients who completed 12 months of follow-up.

Results

A total of 212 patients were included in the study, and 30 patients in the 12-month evaluation. The mean age, BMI, and body fat percentage were 41.9 ± 13.2 , 38.2 ± 7.1 , and 43.4 ± 9.2 , respectively. 113 patients underwent metabolic bariatric surgery. The major complications rate was 0% and the total early hospital readmission rate was 5.31%. Weight loss (TWL: 30.94%) and body fat percentage loss were statistically significant. Total cholesterol, HDL, LDL, and triglyceride values decreased significantly ($P < 0.05$). The remission rate of comorbidities at 12 months was 66.6%, 90%, 100%, and 54.4% for hepatic steatosis, arterial hypertension, obstructive sleep apnea syndrome, and dyslipidemia, respectively. The dropout rate at 6 months was 14.89%, and at 1 year 36.17%. Adherence to the follow-up scheme was 51.71%.

Conclusion

This study demonstrates the efficacy and safety of the program in controlling comorbidities and optimizing body composition at 1 year of follow-up. Strategies to reinforce follow-up should be strengthened to increase adherence and decrease dropout. Quality and safety measurements of operated patients were also assessed.

P-427

TREATMENT DECISION ALGORITHM OF THE PATIENT CANDIDATE FOR BARIATRIC SURGERY WITH WALL ABDOMINAL DEFECT

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Background

Obesity represents an independent risk factor for the development of primary and recurrent ventral hernias (VH), and of complications associated with their surgical treatment, especially in terms of surgical site infections (SSI) and of recurrence of the defect, for which the BMI represents the main prognostic factor, with a rate ratio of 1.1 for each increasing unit of BMI.

Objectives

The aim of this poster is to evaluate the safety and efficacy of the combined surgical treatment of obesity and wall defect, through the review of our case series and the comparison of postoperative outcomes with patients undergoing bariatric surgery only. The primary endpoints are postoperative morbidity. The secondary endpoints are the incidence in patients undergoing treatment of the defect, both combined and deferred, of recurrence, pseudorecurrence, incisional hernia on the trocar, seroma and chronic pain.

Methods

Between January 2009 and June 2020, 430 patients affected by II and III degree obesity underwent bariatric surgery at our Center. Our study is configured as a retrospective analysis that compares the medium-long term results and outcomes of the combined and deferred approach. Categorical variables were analyzed with Fisher's Exact T-test, continuous variables with Student's T-test, both with two tails; p values < 0.05 were considered significant.

Results

Decision algorithm and standardization of surgical strategy. On the basis of our experience and the review of the literature, we have therefore developed a decision-making algorithm that allows us to stratify patients on the basis of symptoms, the critical BMI value and the unfavorable characteristics of the wall defect, with the aim of choosing the most appropriate surgical strategy for each patient.

Conclusion

An analysis of the literature shows that the treatment of wall defects in subjects affected by obesity is feasible and safe, especially if performed with the laparoscopic technique, with a reduction in the incidence of surgical site infections compared to open treatment, with good medium-term results -long term as regards the incidence of recurrence. The planning of the best surgical strategy and the execution of combined and/or complex operations must be entrusted to high-volume centres, equipped with ultra-specialised teams.

P-428

TRENDS AND SAFETY OF BARIATRIC REVISIONAL SURGERY IN ITALY: MULTICENTER, PROSPECTIVE, OBSERVATIONAL STUDY

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Background

Revisional bariatric surgery (RBS) represents a further solution for patients who experience an inadequate response following primary bariatric surgery (BS) or significant weight regain following a short-term satisfactory response. This represents a challenge for bariatric surgeon. Guidelines for RBS are lacking, however, during the last years an increase trend in offering a further bariatric procedure has been reported.

Aim

To analyze trend, mortality, and complications at 30 days, including readmission rate, reoperations for any reason after RBS in Italy.

Design

Longitudinal, prospective, multicenter study.

Setting

10 high-volume Italian bariatric centers.

Methods

All patients undergoing RBS between 01.10.2021-30.03.2022 were enrolled in a prospective, online database, registering reasons for RBS, technique, mortality, intraoperative and perioperative complications, readmission and re-interventions for any reason. Patients undergoing RBS during same calendar interval of 2016-2020 were considered as control group.

Results

A total of 220 patients were prospectively enrolled and compared with 560 control-group patients. The mortality was 0.45 vs 0.35%, with an overall of 0.25%. No difference was found for any of the examined variables, including mortality, readmission, and reoperation rates. Gastric bypass was the most used revisional procedure (56%). Sleeve gastrectomy was the most revised procedure in the study group, while gastric band in the control group. RBS represents up to 9% of the total BS in the Italian participating centers.

Conclusions

RBS is safe and the current trends in Italy are showing a shift towards sleeve being the most revised procedure and bypass is the most used for RBS. Laparoscopic approach represents the standard also in case of RBS.

P-429

TROCAR SITE DEFECTS AFTER BARIATRIC SURGERY: SHOULD WE CLOSE? PROSPECTIVE OF BARIATRIC SURGEONS AND REVIEW OF CURRENT LITERATURE

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Introduction

Port or Trocar site hernia (TsH) is a type of incisional hernia that occurs at port or trocar sites after laparoscopic surgeries (1-6%). It is a rare but potentially dangerous complication after laparoscopy that can lead to various consequences and possible complications.

Aim of the study

To survey and analyze the prospective and clinical practice of bariatric surgeons about necessity of closure of port site defects after different bariatric procedures.

Methods

A blinded survey is being sent to surgeons in different bariatric societies all over the world, including but not limited to IFSO, ASMBS and ACS members in addition to other local and national societies.

Results

The survey included different questions about the number, site, technique of closure of these defects if present, in addition to the frequency and management of TsH in their practice. The survey is still ongoing and the results will be ready by the start of July (before presenting it in IFSO 2023). A comprehensive review of current literature is also done and will be presented and compared with other results.

Conclusion

A final conclusion will be obtained and presented after analyzing different surgeon's practices and comparing it to the current literature.

P-430

TWO CASES OF ESOPHAGEAL PERFORATION DUE TO INTRAGASTRIC BALLOON POSITIONING

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Background

Serious complications after Bioenteric Intra-gastric Balloon (BIB) positioning are rare, and include gastric ulcer (0.3%), gastric perforation (0.1%), and small bowel obstruction following balloon migration (0.09%).

Objectives

We present two cases of esophageal perforation due to BIB placement, that were admitted to our surgical center after the endoscopic procedure.

Methods

Case 1: A 73-year-old male patient with obesity (BMI 46) was admitted to our hospital a few hours after intra-gastric balloon implantation. A CT scan revealed the presence of the device at the base of the left lung, and perforation of the lower thoracic esophagus (Figure 1). Case 2: A 29-year-old male patient with obesity (BMI 44) was admitted to our hospital because of the sudden onset of respiratory failure and acute pain during the endoscopic procedure. The CT scan revealed the presence of intra-gastric balloon at the apex of the left lung, with pneumothorax and pneumo-mediastinum next to the lower third of the esophagus (Figure 2). Because of the life-threatening condition and of hemodynamic instability, both patients underwent a damage control surgery with a two-stage procedure. Stage one consisted of a laparoscopic approach with esophagogastric resection, endoscopic balloon removal, and gastrostomy tube placement. Three months later, after the optimization of clinical conditions, and adequate weight loss, a stage two thoracoscopic and laparoscopic procedure was performed, to restore the digestive tract continuity with an esophagogastric anastomosis. The post-operative course was uneventful in both cases, and gastrografin swallow showed neither anastomotic leak nor strictures.

Results

After a respective 6-month and 1-year follow-up, both patients are alive and in good health.

Conclusion

To our knowledge, these are the first two cases of esophageal perforation due to intra-gastric balloon positioning. Our cases witness how life-threatening complications of bariatric surgery should be managed in referral centers to ensure an optimal resolution.

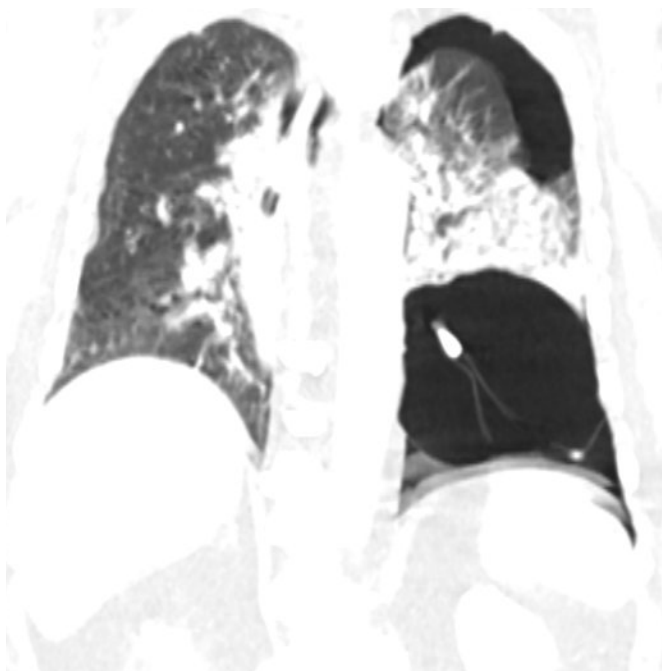


Figure 1.

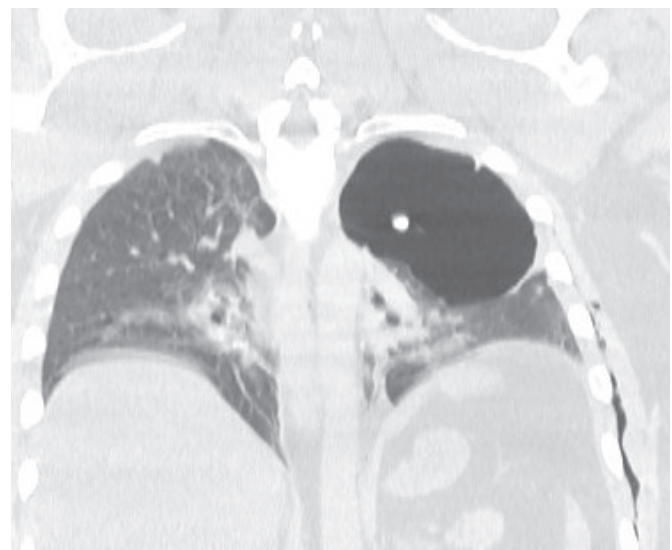


Figure 2.

P-431

UNKNOWN ANTERIOR GASTRIC SURGERY – SURPRISE AND PITFALLS – CASE REPORT

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Background

Case report of one 37yo female patient with significant associated pathology, BMI 41, with anterior bariatric surgery: gastric ring 2009, ring removed by open surgery in 2021, admitted for scheduled gastric sleeve. Previous superior digestive endoscopy – antral gastritis with some ulcerations, H pylori positive, esophageal reflux – medical treatment, ultrasonography –hepatosplenomegaly, hepatic steatosis, lab-tests normal. We performed exploratory laparoscopy – intraoperative findings: very strong perigastric adhesions, subhepatic, between large bowel stomach and abdominal wall, on anterior surface of stomach we found one monofilament blue suture thread after adhesiolysis from abdominal wall. Posterior gastric dissection was impossible and we stopped the operation (we don't had informed consent of the patient for other bariatric procedure). After 3 month, we performed one second surgical procedure by laparoscopy too, with consent for by-pass. The intraoperative situation was more favorable, after perigastric adhesion removal we find the blue suture thread and one gastric bipartition with one stapple line of the vertical part of the stomach. We stappled horizontal the stomach under the bipartition, we calibrated the proximal part of the stomach with Faucher CH 35F and we proceed to partial longitudinal gastrectomy excluding the anterior stapple line. We finished the procedure with one loop by-pass at 170 cm from Treitz. Normal postoperative evolution and discharge at day3 p.o.

Objectives

We want to share the pitfalls of our unusual case, describing the intraoperative findings, illustrating all the significant steps of the operations, , the redo options, the mistakes of the case.

Methods

We documented the case with medical records, photos and video of the operations.

Results

Results of the operation was positive, good evolution and good weight loss at 2 months.

Conclusion

We must be prepared any time for intraoperative surprises at patients with prior bariatric surgery, sometimes unusual and not complete documented surgical procedures. Is important to have prior consent of the patient for any bariatric procedure for avoiding reoperations. The operating team must be prepared to adapt the surgical technique to local situation, including the canceling of the procedure.

P-432

UNRESOLVED FISTULA AFTER SLEEVE GASTRECTOMY SUCCESSFULLY TREATED WITH TOTAL GASTRECTOMY: MANAGEMENT OF A CHALLENGING COMPLICATION

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Background

Sleeve gastrectomy (SG) is a popular weight loss surgery, but it has risks, including serious complications such as leaks, bleeding, strictures, and fistulas. These complications can be challenging to manage and may require surgical intervention. In particular, leakage has been reported to be life-threatening and associated with a high mortality rate.

Objectives

A 45-year-old woman presented to the emergency department with fever and abdominal pain. Eight days prior, she had undergone SG, had hypertension, and had a preoperative BMI of 30.1kg/m².

Methods

CT imaging revealed the presence of an intra-abdominal leak, and emergency surgical intervention was performed. The patient underwent laparoscopic multiple drainage procedure. After operation, she was treated with endoluminal vacuum therapy (EVT) for over 90 days with unsuccessful resolution of the fistula. During this time, the patient received total parenteral nutrition and close monitoring. Despite these efforts, the fistula persisted, and surgical intervention was ultimately required. The patient underwent surgical revision with total gastrectomy and feeding jejunostomy.

Results

Although minor leakage was present postoperatively, the patient was discharged 5 weeks after surgery.

Conclusion

While total gastrectomy is not a common treatment option for leakage following SG, it may be considered for persistent fistulas that are not responsive to conservative management. Close follow-up and careful consideration of all treatment options are essential in the management of patients with complications following bariatric surgery.

P-433

USE OF ONLINE-GROUP-EDUCATION SESSIONS IN PLACE OF IN-PERSON-ATTENDANCE, IN A BARIATRIC SURGERY PRACTICE DOES NOT DECREASE CONVERSION TO SURGERY RATES

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Background

Our service instituted standardised patient pathway in March 2018 to allow safe, appropriate, and adequate assessment of all patients under evaluation for bariatric and metabolic surgery. This pre-surgery program includes group education replicating that which is done during an initial surgical consultation. The impact of the COVID-19 pandemic demanded a shift to a virtual platform rather than in person attendance from August 2021. With easing COVID-19 related restrictions on mass gatherings easing, we wanted to evaluate the most appropriate method of service delivery for this component of the pre-surgery program.

Methods

Single center retrospective analysis of all routine referrals processed between 2021-2022 was compared to a previous cohort, where in-person attendance at the group information was required, between 2016-2017.

Results

During the in-person attendance period 458 referrals were received. Three-hundred-seventy-six were offered entry into the pre-surgery program and 236 attended. Of those included in the pre-surgery program, 131 (35%) proceeded individual assessment and underwent surgical intervention. During online education, 632 referrals were received. Four-hundred-forty were offered entry into the pre-surgery program and 298 attended. Of those included in the pre-surgery program, 151 (34%) proceeded to individual assessment and to date, 98 have undergone surgical intervention. Forty-eight remain on the elective surgery waiting list and 5 have been removed having been treated elsewhere.

Conclusion

In our experience, moving to online delivery of patient education did not adversely affect attrition rates and conversion to surgery. On-going research will inform us if online patient education continues to be of similar effectiveness, in the post pandemic era.

P-434

USEFULNESS OF INTRA-OPERATIVE ENDOSCOPY DURING LAPAROSCOPIC SLEEVE GASTRECTOMY FOR MORBID OBESITY: SINGLE-CENTER EXPERIENCE

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Background

Sleeve gastrectomy has become the most common bariatric operation due to its low rates of morbidity and mortality, satisfactory treatment of patients' obesity, and resolution of associated co-morbidities. According to standard technique, calibration of the stomach is performed with varying sizes of bougies, which sometimes may cause esophageal laceration. While use of intra-operative endoscopy has only sparsely been reported.

Methods

Between 2019 and 2022, 27 patients have undergone laparoscopic sleeve gastrectomy with intraoperative endoscopic guidance. Technical aspects of the operation, results concerning morbidity, progressive weight loss, and resolution of co-morbidities were retrospectively reviewed.

Results

Mean follow up period was 12.6 ± 11.2 months. Mean rates of excess weight loss was 18.2 %. 7 patients (25.9%) achieved over 20 % rate of excess weight post-operatively. These rates were inversely related with preoperative age and the existence of preoperative co-morbidities.

Conclusion

Sleeve gastrectomy with intra-operative endoscopic guidance is at least as safe and effective as with the bougie. Given the available expertise and equipment, the use of this technique can increase the intra-operative sense of safety and it might be expected to improve not only immediate but also long-term results.

P-435

VENOUS THROMBOEMBOLIC EVENTS AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY

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Background

Laparoscopic sleeve gastrectomy (LSG) is globally performed as a first-choice procedure in patients with severe obesity. As it is performed on high-risk patients it carries the risk of postoperative complications. Venous thromboembolic events (VTE) comprise a significant cause of postoperative morbidity and mortality.

Objectives

The aim of the study was to investigate the incidence and clinical presentation of thrombotic events after LSG.

Methods

A single-surgeon, observational and retrospective study was conducted from January 2010 to January 2022. A total of 740 patients who underwent laparoscopic sleeve gastrectomy as a primary procedure were included.

Results

The overall incidence of VTE events was 1.35% (n=10). The median age was 54 years. VTE events occurred in 4 women and 6 men. Three patients were diagnosed with superficial thrombophlebitis. Two patients experienced pulmonary embolism (PE), and another two had portal vein thrombosis. One patient had portal vein and cerebral venous thrombosis simultaneously. Two patients had deep venous thrombosis (DVT). All patients had received antithrombotic prophylaxis before the surgery. None of the patients had a previous history of VTE.

Conclusion

VTE is an important cause of postoperative morbidity and mortality in patients undergoing bariatric surgery. Remembering proper thromboprophylaxis and postoperative care encouraging early mobilization is important.

P-436

VERTICAL BANDING GASTROPLASTY REVISIONS: SINGLE CENTER EXPERIENCE

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Background

The purpose of this paper is to outline the perioperative outcomes and indications for VBG revisions. Vertical banding gastroplasty (VBG) was common bariatric procedure in the nineties of the last century. The late complications and the weight regain have caused it to be superseded by other emerging procedures. There are several revisionary alternatives, but the Roux-en-Y gastric bypass (RYGB) and reversal of VBG are the two most popular.

Objectives

To present the options for VBG revision with the best conversion to RYGB and or reversal.

Materials and methods

This is a retrospective review of all the patients who have undergone revisions after VBG and done by the authors. The results were examined with respect to the indications, preoperative preparations, surgical methods, and preliminary results.

Results

There were 540 revisional bariatric procedures between 2010 and 2021, of which 55 (10.2%) patients had VBG revisions. 33 patients underwent conversion to RYGB, 16 underwent VBG reversal by gastro-gastrostomy, 3 underwent conversion to MGB, one underwent conversion to LSG, one underwent conversion to BPD, and one underwent anterior plication of the gastric pouch. All patients, with the exception of three, were finished laparoscopically; there were no mortality, just two leaks and two occurrences of postoperative intraluminal hemorrhage that were conservatively managed. The most frequent cause of reversal was extreme weight loss, whereas the most frequent cause of conversion was insufficient weight loss, whether with or without GERD.

Conclusions

Laparoscopic revision of VBG is safe and feasible and effective to treat the VBG failure or complications. VBG revision is still challenging and demanding a high level of expertise.

P-437

VERTICAL GASTRECTOMY WITH INTESTINAL TRANSIT BIPARTITION FOR THE TREATMENT OF SEVERE OBESITY

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Introduction

Obesity with a Body Mass Index (BMI) > 50 Kg/m is a severe condition, usually accompanied by equally critical comorbidities, such as Diabetes, Hypertension, Sleep Apnea, mobility disorders and others. Bariatric Surgery stands as the most efficient treatment available in order to provide sustained weight loss. Although, in this group of patients, the choice of the ideal procedure maybe challenging. Vertical gastrectomy with intestinal transit bipartition (SG+TB) stands out as a growing therapeutic choice.

Objective

Analyze SG+TB as a surgical choice for treating severe obesity and its comorbidities.

Methods

An integrative literature review was constructed from the development of the guiding question; primary study search on databases (Scielo, pubmed) were performed, followed by data extraction, study evaluation, analysis and synthesis of results and review presentation. 22 selected articles from the databases were crossed using the following descriptors: “Gastrectomy” and “Obesity”.

Results

Following Santoro et al.’s definition, the SG+TB surgery is a treatment of choice for better and rapid glycemic and metabolic control and has been achieved for those with uncontrolled type 2 diabetes. Establishing an opening in the ileum from the stomach antrum, the SG+TB provides an additional passage for ingested food. This is believed to provide a increase incretin secretion As the duodenum and jejunum were protected, the nutritional and absorption functions of these intestinal parts are preserved, preventing secondary problems such as osteoporosis, peripheral neuropathy, and anemia.. It is a recently introduced treatment method, and there are studies proving superiority over other bariatric surgery options, such as Distal Roux-en-Y Gastric Bypass (II-DSG), Ileal Transposition, and Roux-en-Y Gastric Bypass in terms of glycemic control, weight loss, improvement of lipid profile, and quality of life. Although few SG+TB studies have been reported, the results suggest that there are no severe vitamin deficiencies after this surgery.

Conclusion

Through the literary studies exposed above, vertical gastrectomy surgery associated with intestinal transit bipartition is a safe and effective alternative, offering superiority when compared to other surgical treatments for severe obesity, reducing, besides the weight, the rate of secondary complications and metabolic and cardiovascular risks coupled with obesity comorbidities.

P-438

VITAMIN D DEFICIENCY IN PATIENTS UNDERGOING METABOLIC BARIATRIC SURGERY

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Background

Metabolic bariatric surgery (MBS) is the most effective treatment for severe obesity. Vitamin D deficiency is a common complication encountered during preoperative evaluation.

Objective

To estimate the pre- and postoperative prevalence of vitamin D deficiency in patients undergoing bariatric and metabolic surgery.

Methods

This was conceived as retrospective, descriptive and cross-sectional study, with quantitative approach. The database was consulted in the period of 2018-2019 and 2020-2021. Body weight, body mass index, age, sex and vitamin D deficiency were evaluated before and after bariatric and metabolic surgery. For all data, the results were considered significant ($p < 0.05$). Quantitative data analyzes were described by mean and standard deviation and the longitudinal variability of quantitative medians were evaluated using generalized estimating equations.

Results

In total, 100 patients were included, with mean age (41.3 ± 9.7) and (38.6 ± 10.2), 85% of whom were women. Preoperative vitamin D deficiencies were found in 85% of women and 15% of men. An increase in vitamin D was observed in 45.5% of patients after 6 months and in 45.6% of patients in the following 12 months. There was a significant difference in the rate of vitamin D deficiency and increase ($p = 0.044$) and total weight loss (%TW) ($p = 0.001$) in the periods studied after MBS.

Conclusion

Preoperative vitamin D deficiency is common in patients undergoing (MBS). Regular follow-up with correct supplementation is recommended for these patients, in order to attain higher vitamin D levels. The results highlight the need for greater emphasis on correcting possible nutritional deficiencies before and after bariatric and metabolic surgery.

Keywords: Gastric bypass; Metabolic bariatric surgery; Obesity; Vitamin D deficiency.

P-439

WEIGHT RECURRENCE AFTER ROUX-EN-Y GASTRIC BYPASS: RESULTS OF TREATMENT WITH OR WITHOUT GLP-1 AGONIST BEFORE DISTALIZATION

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Background

Weight regain (WR) and insufficient weight loss (IWL) after bariatric surgery (BS) leaves patients dissatisfied, lowering their quality of life, and can cause recurrence of obesity accompanied comorbidities. It affects approximately 10-20% of patients after Roux-en-Y gastric bypass (RYGB) with long-term follow-up. Contrary to other types of BS, a consensus is lacking on correct treatment of WR following RYGB .

Objectives

This study aims to provide the results of conversion to a distal RYGB (DRYGB), and comparing additional GLP-1 agonist pre-treatment to conventional treatment (dietician, lifestyle advise, exercise) in the months leading up to revision.

Methods

A database of all distalizations performed in a single, high volume bariatric institute were retrospectively analysed. Baseline characteristics include age, sex, time until revision, highest weight/BMI before primary RYGB, lowest weight/BMI after primary RYGB, weight/BMI at presentation WR and status of obesity associated comorbidities. Weight changes between presentation WR/IWL and day of surgery were compared between patients receiving GLP-1 pre-treatment and those receiving conventional. Decision on receiving GLP-1 was mostly based on patient financial status and choice. Secondary outcome: effects on comorbidity, side effects of GLP-1 agonists, post-operative complications (Clavien Dindo \geq III), metabolic outcome such as malabsorption and deficiencies.

Results

26 patients received DRYGB surgery between 2020 and 2023. 9 patients received pre-distalization treatment with GLP-1 agonists for a mean period of 6.8 months, after which they lost a mean weight of $-14\text{kg} \pm 11.0\text{kg}$, compared to $-1.8\text{kg} \pm 9.2\text{kg}$ with only conventional treatment. All patients received distalization of the roux-limb, thus lengthening the biliopancreatic-limb, with a common channel of at least $>200\text{cm}$. Mean max weight loss in kg after six months follow-up was $-14.5\text{kg} \pm 11\text{kg}$. Mean weight loss at 3 months, 6 months, 12 months and 18 months follow-up were -7.4kg , -13.1kg , -14.7kg and -17.7kg respectively.

Conclusion

Responsiveness to GLP-1 agonists improves outcome after distalization of gastric bypass. Further research and long term follow-up results are needed to provide data for best (subgroup) treatment in the case of weight recurrence after gastric bypass.

P-440

WEIGHT RECURRENCE AND NON-RESPONDERS AFTER ROUX-EN-Y GASTRIC BYPASS - LONG-TERM RESULTS OF DISTALIZATION WITH TOTAL ALIMENTARY LIMB LENGTH OF 250 OR 300 CM

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Background

Non-responders or weight recurrence may occur after Roux-en-Y gastric bypass (RYGB). Revisional surgery includes distalization. However, few studies have looked at the associations between the total alimentary limb length (TALL) and weight loss outcomes, none with long-term results.

Objectives

Peri- and postoperative outcomes were assessed after employing TALL of either 250 cm or 300 cm in the failed RYGB.

Methods

This study is a retrospective cohort analysis of 90 patients that underwent laparoscopic distalization between January 2006 and January 2016 due to failed RYGB. The index RYGB was modified to TALL of 250 cm (n=48) or of 300 cm (n=42) which entailed elongating the biliopancreatic limb (BPL) and transposing the Roux limb (RL) to a common limb (CL) of 100 cm and 150 cm, respectively. Long-term weight loss outcomes along with nutritional and vitamin status were analysed.

Results

Preoperative BMI at distalization was 38.6 kg/m². After 8 years, excess weight loss (EWL) was 61.8%. No differences between the two groups were seen in weight loss outcomes or early surgical complication rates (6.7%). However, more vitamin and nutritional deficiencies were present in the TALL 250 cm group (50.0% and 35.4%, respectively) versus the TALL 300 cm group (33.3% and 14.3% respectively), which led to laparoscopic revision in 27 patients by lengthening the TALL with 100 cm. Patients with weight recurrence after index RYGB had in average 59.9% higher EWL than non-responders.

Conclusion

Distalization of the failed RYGBP is safe and effective, but TALL should not be shorter than 300 cm (and CL 150 cm) due to high rates of malnutrition. Adequate supplementation and long-term follow-up are mandatory to prevent serious malnutrition.

P-441

WEIGHT REGAIN IN LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING: THE PATIENTS' EXPERIENCE

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Background

Bariatric surgery is an effective treatment for obesity; however, it is estimated that at least 1 in 6 patients regain more than 10% of their body weight within 5 years after surgery.

Objectives

This study aims to evaluate the percentage of WR in LAGB, also analyzing the patient's point of view.

Methods

The trend of anthropometric data and Binge Eating Scale were evaluated 1 year, 3 years, 5 years, 10 and over 15 years after surgery in 7500 patients undergoing gastric banding. Semi-structured individual interviews with open questions were also conducted with 100 patients, thus placing the focus on the patient experience.

Results

Participants reported difficulty eating in social contexts, loneliness, family difficulties, change in feelings of fame and satiety, physical and mental health problems, stigma towards their condition that led them to lose sight of the management of their intervention and their health. Participants who reported a WR perceived it as an unexpected and emotionally difficult experience that led to discouragement, shame, and frustration. The patients who experienced the benefits of surgery, despite the weight gain, however, have reported emotional distress, loss of control, hopelessness, discouragement, shame and frustration, and a tendency to not show up for follow-up.

Conclusion

Therefore, the results indicate that social support, follow-up and behavioral strategies were perceived as facilitators for weight management, as they decrease the emotional burden and could help long-term post-surgical weight management.

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WHAT ABOUT MY WEIGHT? INSUFFICIENT WEIGHT LOSS OR WEIGHT REGAIN AFTER BARIATRIC METABOLIC SURGERY

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Background

Bariatric metabolic surgery (BMS) has been established as the most efficacious intervention for lowering body weight in severe obesity, and improving or remission the comorbidities (1). Unfortunately, in a variable portion of patients, insufficient weight loss (IWL) and weight regain (WR) can occur following BMS, which are the common reasons to qualify for revisional BMS.

Objectives

This review study aimed to investigate the definition, etiology, risk factors (RFs), management strategy, and prevention of IWL and WR following BMS.

Methods

We searched PubMed, Scopus, EMBASE, Web of Science, Google Scholar, and Cochrane electronic databases to retrieve relevant articles.

Results

While there is no accepted standard definition for post-BMS IWL and WR, the terms “Lack of maintenance of total weight loss (TWL) >20%” based on TWL and “weight change in percentage compared to nadir weight or weight loss” are preferred. Several mechanisms, including hormonal/metabolic, dietary non-adherence, physical inactivity, mental health, and anatomic surgical failure, are possible etiologies of post-BMS IWL and WR; however, the specific cause is yet unclear. Preoperative body mass index (BMI), male gender, psychiatric conditions, comorbidities (type 2 diabetes mellitus, hypertension, obstructive sleep apnea, low HDL-c), age, sticking to a poor diet, eating disorders, poor long-term follow-ups, lack of sufficient physical activity, time since the surgery, African Americans, and genetic predisposition–epigenetic factors are the most important RFs. The principle and basis of treatment are lifestyle interventions, including dietary, physical activity, psychological, and behavioral therapy. Pharmacotherapy can be added to these treatments if needed. In the last treatment line, different techniques of endoscopic surgery and revisional surgery can be used based on the type of anatomy, the patient’s characteristics, and the surgeon’s expertise. Finally, behavioral and psychotherapeutic interventions, dietary therapy, and physical activity therapy are the essential components of prevention, just as they are in treatment.

Conclusion

Many definitions exist for WR, less so for IWL. Etiologies and RFs are complex and multifactorial. The management and prevention strategy are multidisciplinary. Some knowledge gaps, especially for IWL, exist, and these gaps must be filled to strengthen the evidence used to guide patient counseling, selection, and improved outcomes.

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WHAT IS THE RIGHT TIMING TO PERFORM CHOLECYSTECTOMY?

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Background

Weight loss following bariatric surgery increases risk of biliary stones and therefore the need of a subsequent cholecystectomy. Part of the surgical community do not recommend concomitant cholecystectomy for asymptomatic gallstones during bariatric surgery procedure. However there is no consensus regarding the correct timing to perform cholecystectomy.

Objectives

The aim of our study is to evaluate the incidence of gallbladder stones requiring cholecystectomy after bariatric surgery and to compare postoperative complications, length of stay (LOS), and operative time in patients undergoing cholecystectomy during or after bariatric surgery.

Methods

We extracted from our database data of patients who underwent bariatric surgery in our Institution from 2018 to 2022, with or without concurrent cholecystectomy. Usually, to prevent gallstone formation, we prescribe ursodiol 600 mg/day for 6 months after bariatric surgery, and schedule a follow-up transabdominal ultrasound.

Results

A total of 2017 bariatric procedures were performed in the analyzed period, 442 patients who had previous cholecystectomy were excluded from the analysis. We included 1049 sleeve gastrectomies (SG), 441 gastric bypass (RYGB) and 85 adjustable gastric banding (AGB), all performed in laparoscopy. We identifies 26 cases of concomitant bariatric surgery and cholecystectomy (15 cases during SG and 10 cases during RYGB) and 106 patients who underwent cholecystectomy after a average of 22 months from bariatric surgery, 64 following SG (6,2%), 38 following BP (8.8%) and 4 after AGB (4,7%). The incidence of gallbladder stones requiring cholecystectomy after bariatric surgery in our series is 6.8%. The mean BMI in the first group was 41 Kg/m² and for the second group was 28 Kg/m² (with pre-bariatric BMI 43 Kg/m²). In the second group, 2 patients (1,8%) required preoperative CPRE for choledocholithiasis. Operative time and incidence rate of postoperative early complications were higher when cholecystectomy was performed during bariatric surgery (12% vs 3,8%), with a prolonged LOS (4 vs 2 days).

Conclusions

Since postoperative complications are significantly higher when cholecystectomy is performed during bariatric surgery, we suggest to perform it only for symptomatic patients. However, if we don't perform concurrent cholecistectomy, we should carefully follow patients during the first weight loss period to avoid biliary complications.

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WHO STILL WANTS A GASTRIC BAND IN 2022?

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Introduction

Adjustable gastric banding decline rapidly and some surgeons have voluntarily abandoned this technique. We have conserved this indication to treat obese patients. The aim of this study is to describe what kind of population still has had benefited from a gastric banding in 2022.

Material and Methods

For each patient we report: gender, age, geographical location, weight, BMI, family history of obesity, previous bariatric procedure, number of children, profession, motivation of the patient to choose the band, duration of preoperative follow-up, postoperative course during the first year and weight loss at 6 months.

Results

Between the first January and the 31 of December 2022, 228 gastric band were placed. They were 181 females (79%) and 47 males (21%), the mean age was 36 years old. They came for 58% from the department and 42% from another department. The initial mean weight was 115 kg (83-191) with mean BMI 40.8 (32-69). Eighty two percent of the patients had a family history of obesity with 21% of cases with one or more than one members of the family with bariatric surgery. Among them, 68% had an adjustable gastric band. Co-morbidities were present in 90% of cases. For 96% of the patients it was a first bariatric procedure. Among those patients 60% had kids and in those 60%, 20% were big families (more than 3 children). 78% of the patients were volunteer for a band. Four percent of those patients came with this demand after getting rejected in other bariatric centers. In 7% of the cases they didn't have any particular ideas about the technic. In total, 15% of the patients were orientated towards a band for medical purposes (age, high BMI, co-morbidities or previous surgical intervention). They were no postoperative complications requiring a re admission.

Conclusion

The adjustable gastric band stays a procedure that patients choose. This choice is mainly due to the experience of a family member, and because of the low risk of this procedure. The band allows, in case of weight regain, to restart a second treatment without any added risk.

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WISH OR TRUTH – CAN DIGITAL INTERVENTIONS STOP THE OBESITY CRISIS?

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Background

More than 20 years have passed since WHO declared obesity as a disease and included it in the group of non-communicable diseases. Despite intensive research and attempts to establish prevention and management strategies at the individual and societal levels, the prevalence of obesity continues to increase in Western and developing countries, placing an increasing burden on healthcare systems. Recognizing that obesity is a multifactorial, chronic, relapsing disease that requires long-term management with whole-system support makes it challenging to develop successful and sustainable treatment modalities.

Objectives

As digitization in healthcare advances, the question arises as to what extent digital interventions can solve the problem of the obesity crisis.

Methods

A systematic literature search was performed in PubMed and in databases of digital health apps.

Results

Technological innovations such as mobile health (mHealth), wearable devices, and the Internet of Medical Things (IoMT) offer new opportunities to improve the quality and success of obesity care and bariatrics. Artificial intelligence (AI) and machine learning (ML) algorithms are needed for increasingly automated, personalized interventions and long-term patient support. Given the complexity of the human body and its physiology, innovative approaches to personalized medicine must be incorporated into diagnostics and monitoring, such as microbiome, genetic and epigenetic factors, metabolomics, and clinical markers. For successful and sustainable digital solutions, aspects of behavioral therapy should be considered, such as BITs (*behavioral intervention technologies*) or JITAIs (*just-in-time adaptive interventions*).

Conclusion

Digital innovations in combination with personalized medicine can improve obesity therapy and bariatric surgery outcomes if used effectively, efficiently, and in a patient-centered way.

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RYGB IN ADOLESCENTS, WHAT DATA SHOWED US ACROSS 15 YEARS OF FOLLOWING UP

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Background

Adolescents with obesity are related to shortened life expectancy and reduced quality of life. Roux-en-Y gastric bypass (RYGB) resulted in significant weight reduction and cardiometabolic benefits in adolescence. While the short-term outcomes of bariatric surgery are promising, the long-term data are still limited in young adulthood.

Objective

This study aimed to report long-term outcomes following RYGB in adolescents, regarding the remission and improvement of co-morbidities, weight loss analysis, and perioperative and postoperative complications across 15 years of follow-up.

Methods

Between June 2005 and November 2016, 58 adolescents with obesity underwent Roux en-Y gastric bypass. 16 patients were excluded due to complete loss follow-up. Of the 42 patients who are eligible to be enrolled in the study, 38 patients underwent primary RYGB while 4 patients underwent RYGB as a revisional procedure after the failed gastric band. Short- and long-term data were collected retrospectively through routine follow-up and telephone surveys. Demographics, complications, and weight loss analysis were determined.

Results

Forty-two adolescents with a baseline age of 16.1 years (SD 1.01), a weight of 110.07 kg (SD 17.02), and a body mass index (BMI) of 3.08 kg/m² (SD 6.14) underwent RYGB. Weight change was 35.63±5.72, 37.78±7.11, and 36.23±1.81 after 5, 10, and 15 years of follow up respectively. Fourteen RYGB participants (48.3%) from 29 patients who enrolled in follow-up in 2023 underwent revisional surgeries and 28.6% due to weight regain. Iron deficiency was the most common micronutrient deficiency (51.7%). 37.9% of patients sought for post-bariatric body contouring with the most surgery performed being the abdominoplasty.

Conclusion

Long-term adolescent bariatric outcomes show remarkable maintenance of weight loss and improved health trajectories. Nevertheless, these benefits were associated with concerns about micronutrient deficiency and the need for additional operations related to surgery.



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