Conflict of interest disclosure (COI)

- **I have no potential conflict of interest to report**

OAGB: Short and Long Term Complications: What to look for and How to Manage

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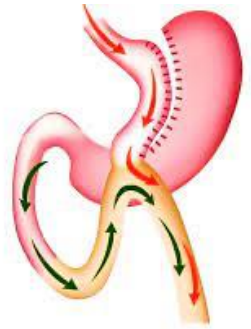
Studies	Early minor complications	Early major complications	Anastomotic leak	Readmission rate	Marginal ulcer	Anaemia	GORD symptoms	Revision surgery	Mortality	Malnutrition
Lessing, 2017, Israel [10]	1.96%	2.45%	1.71% (5/7 in revisional surgery)	2.7%—early 1.96%—late	0%	–	0%	0%	0%	0%
Taha, 2017, Egypt [11]	3.3%	6.1%—late	0.1%	–	0.2%	3.1%	1.2% (3 pt. needed Braun's anastomosis)	0.8% (1 pt. with anastomosis leak converted to RYGB)	0.1%	0.2%—EWL > 100% All 3 pts. needed revisional Sx
Meydan, 2017, Israel [12]	–	1.29%	0.94%	–	0.64%—1° 0.64%—2° + 1.2% stenosis	0.64%	–	1.29% converted to RYGB	0	–
Carbajo, 2016, Spain [13]	2.7%	1.3%	0.16 0.08 0.83 Total—1.07	0.8%—early 1%—late	0.5% + 0.5% stomal stenosis	Up to 30% mild 1.25%—severe	2%—clinical reflux	–	0.16%	1.2%
Seetharamaiah, 2016, India [14]	–	–	0%	10%	2%	–	2% (2 pts)	0%	0%	–
Kansou, 2016 France [15]	–	4.4% +1.4%	5.1%		7.6% (stenosis 16.9%)	–	–	0%	0%	–
Rheinwalt, 2016, Germany [16]	3.0%	–	0.6%	–	–	–	0.6%	1.2%	0%	–
Jammu, 2015, India [17]	–	–	0%	–	0.6%	4.9%	0.6% +0.4%	2 pts. reversal	0	3.8% (severe hypoalbuminemia)
Mokhber, 2015, Iran [18]	–	–	1.8%	–	0%	21.5% (15% pre-op)	–	0	0	–
Parmar, 2015, UK [19]	3.2%	0.25%	0%	2.4%	3.2%	–	5.6%	1 pt	0%	0%
Peraglie, 2015, USA [20]	4.5%	–	0%	1.2%	0%	–	0%	1 pt	0%	–
Peraglie, 2008, USA [21]	–	–	0%	0%	–	–	–	0%	0%	0%
Chevallier, 2015, France [22]	3.5%	0.3%	0.5% 3—anast 2—remnant	–	2% + 1 stomal stenosis	–	0.7% Convert to RYGB	0.9% 4 pts. reop for wt regain	0.2%	0.2%
Chevallier, 2015, France [23]	7.9%	5.5%	0%	–	4%	3.2%	1.6%	1.6%	0%	1.6%
Prasad, 2014, India [24]	0%	0%	0%	–	–	–	–	–	0%	–
Kular, 2014, India [25]	4.6%	1.3%	0.2%	–	0.6%	7.6%	2.0%	0.3%	0.18%	0.2%
Disse, 2014, France [26]	10%	0	0	10%	10% (2 pts) (smokers)	–	10%	5%	0%	0%
Musella, 2014 (6 centres) Italy [27]	5.5%	–	1%	–	1.7%	5.3%	3.1% dyspepsia	0.2% early 0.8% late	0.2%	0.1%
Darabi, 2013, Iran [28]	5%	0%	0%	0%	10%	15%	5% nausea/ vomiting	0%	0%	0%
Lee WJ, 2012, Taiwan [29]	6.7%	1.8%	1.3%	–	0.6% revision sx for MU 0.1% stricture	–	–	2.8%	0.17%	0.9% need revision Sx
Noun, 2012, Lebanon [30]	2.7% (25/923)—1° 11.6% (9/77)—2°	0.6%	0.7% leak (from gastric tube or excluded stomach)	–	0.65%	–	Total 0.4% (5.1% of revisional pts)	0.4 + 0.1% (converted to RYGB in early phase)	0%	0.4%
Piazza, 2011, Italy [31]	–	3%	0%	–	2%	–	1%	1% Braun's anastomosis at 40 cm	0.5%	–
Rutledge, 2005, USA [1]	5.9%	–	1.08%	–	4%	5%	–	3 pt. for MU 1% (31 pts. for excess WL)	0.08%	1.1%
Wang, 2005, Taiwan [32]	4.3%	1.7%	2.1%	–	8%	9.7%	–	–	0.47%	–



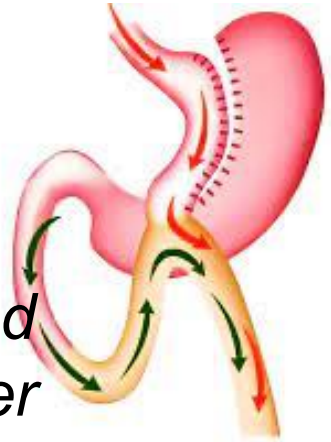
Bariatric Surgery - OAGB
Post-operative Complications

- *Peri-operative*
  - *Bleeding*
  - *Septic complications (leak, leak, leak)*
  - *Bowel Obstruction*

- *Long Term*
  - *Malnutrition*
  - *Marginal ulcer*

- *False acute abdomen*

OAGB
False acute abdomen



Diagnosis of thiamine deficiency should be always considered in a post-bariatric patient presenting with abdominal pain after even a short period of intractable vomiting

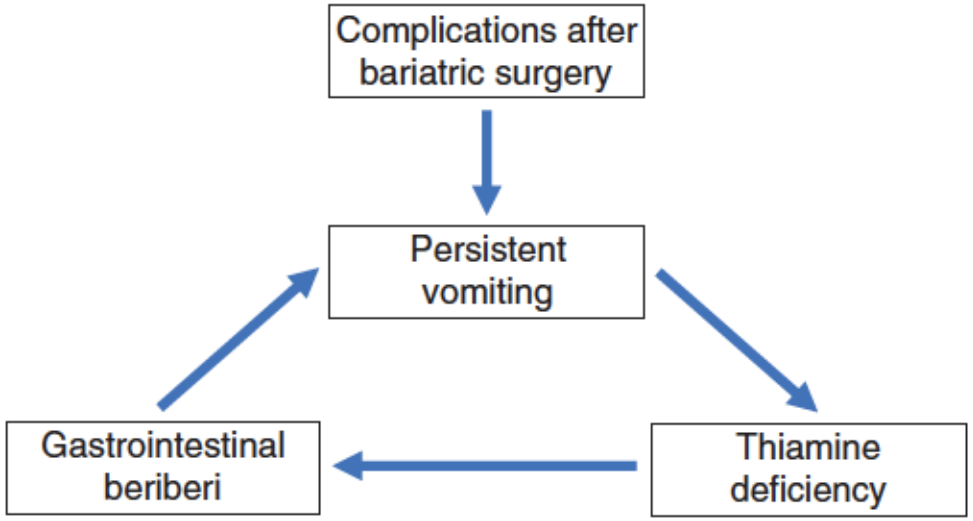
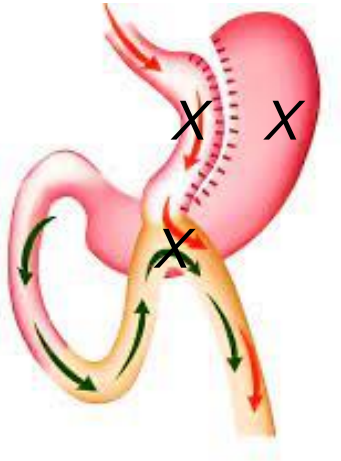


Fig. 15.1 The vicious circle of "gastrointestinal beriberi". Complications after bariatric surgery cause persistent and intractable vomiting precipitating thiamine deficiency; abdominal symptoms of thiamine deficiency (anorexia, nausea and vomiting) can further deteriorate thiamine status



Bariatric surgery
P.O. bleeding

Incidence 1.5- 11% but 85% of them stop without surgery

Bariatric surgery
P.O. bleeding

- *STABLE PATIENT*
- *Observe*
- *Transfuse, if indicated*

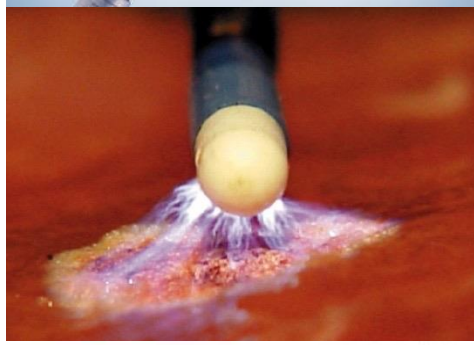
- *Endoluminal bleeding*

UGI Endoscopy. (inspect, evacuate blood clot)

↓

Staple line most common casue of bleeding

clipping, laser beam coag, epinephrine injection, electrocautery



Bariatric surgery
P.O. bleeding

- *Extraluminal bleeding*

CT scan

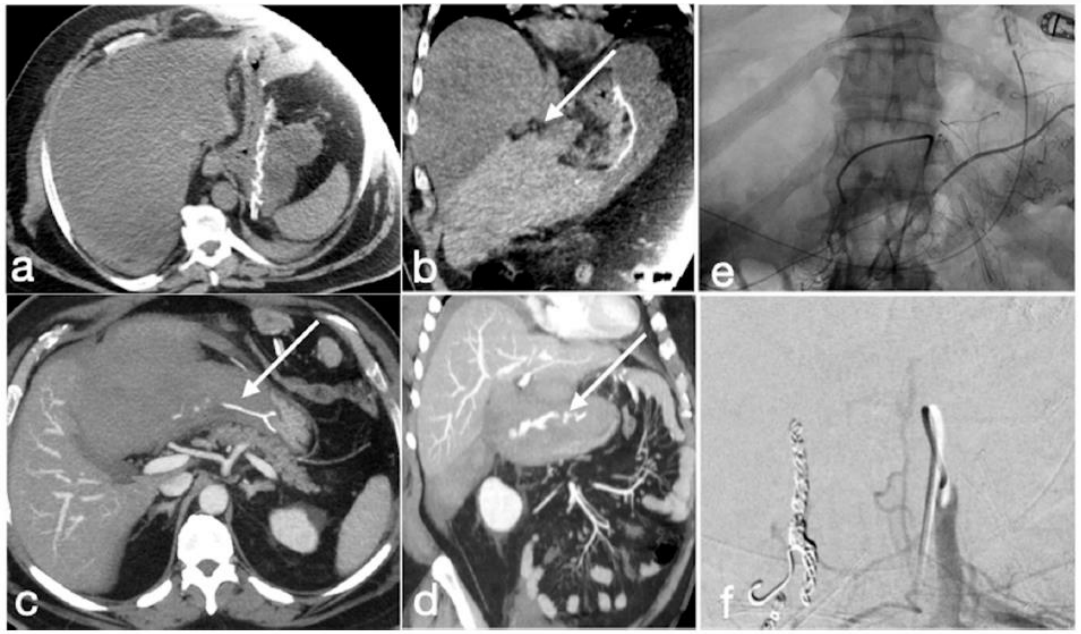


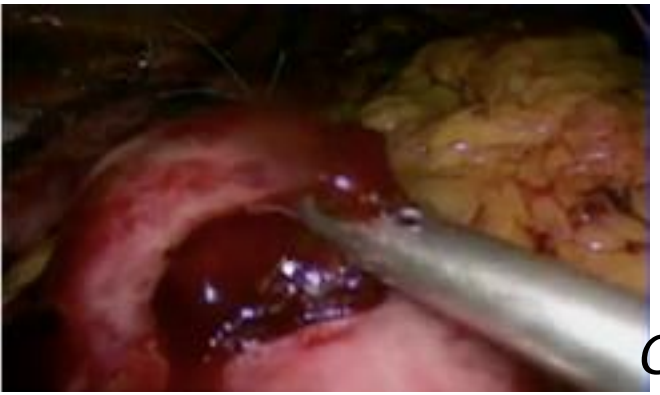
Figure 21. Patient 3. Huge hematoma with active bleeding. A 48-year-old patient developed abdominal pain and tachicardia suddenly after surgery for mini-gastric bypass. See the surgical suture (**a**, axial view). There is also a large hyperdense collection (**b**, coronal view, arrow) with active arterial bleeding (**c**, axial view, arrow), increasing conspicuously in the following portal-venous phase (**d**, MIP coronal view, straight arrow), arising from the gastroduodenal artery (branch of hepatic artery). It was promptly treated by gastroduodenal artery embolization (**e**,**f**).

Common, Less Common, and Unexpected Complications after Bariatric Surgery: A Pictorial Essay

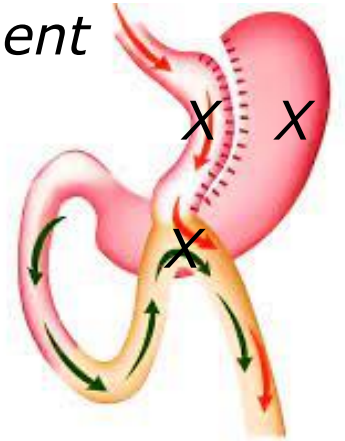
Francesca Iacobellis [1,*,†], Giuseppina Dell'Aversano Orabona [1,†], Antonio Brillantino [2,†], Marco Di Serafino [1], Alessandro Rengo [3], Paola Crivelli [4], Luigia Romano [1,‡] and Mariano Scaglione [4,5,6,‡]

Diagnostics **2022**, *12*, 2637. https://doi.org/10.3390/diagnostics12112637

Hemodynamic instability or failure of non-operative management mandates emergency surgery



OAGB
P.O. intraluminal bleeding

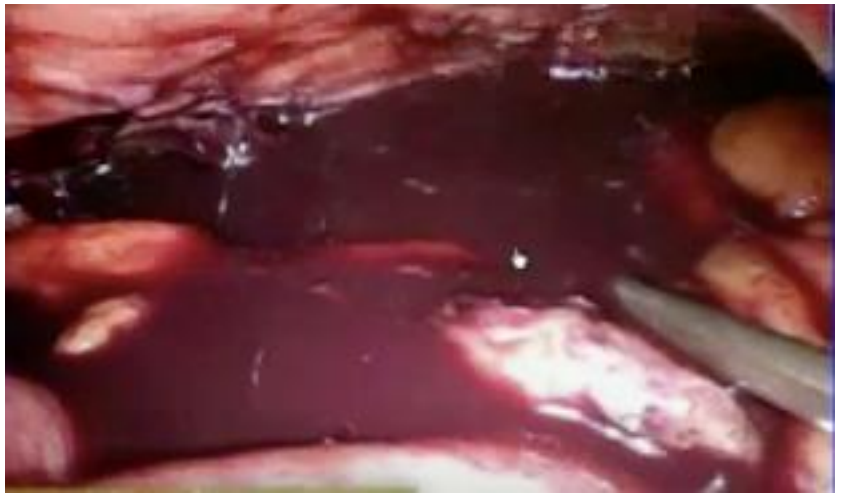


OAGB
PO Extraluminal bleeding

- *Bleeding from anastomosis or staple line*
  - *Open anastomosis to inspect staple line*
  - *Evacuate blood clots*
  - *Oversaw staple-lines*
  - *Combined laparoscopic/endoscopic procedures, (endoscopy identify bleeding vessel and surgeon sutures withouot opening the lumen*

- *Bleeding from GR*
  - *Gastrotomy – evacuate blood clots*
  - *Oversaw staple-lines*

- *Laparoscopy*
  - *Explore possible site of bleeding from spleen,omentum, mesentery or other potential areas and proceed accordingly*



OAGB
Acute abdomen

- *Leakage with/without diffuse peritonitis*

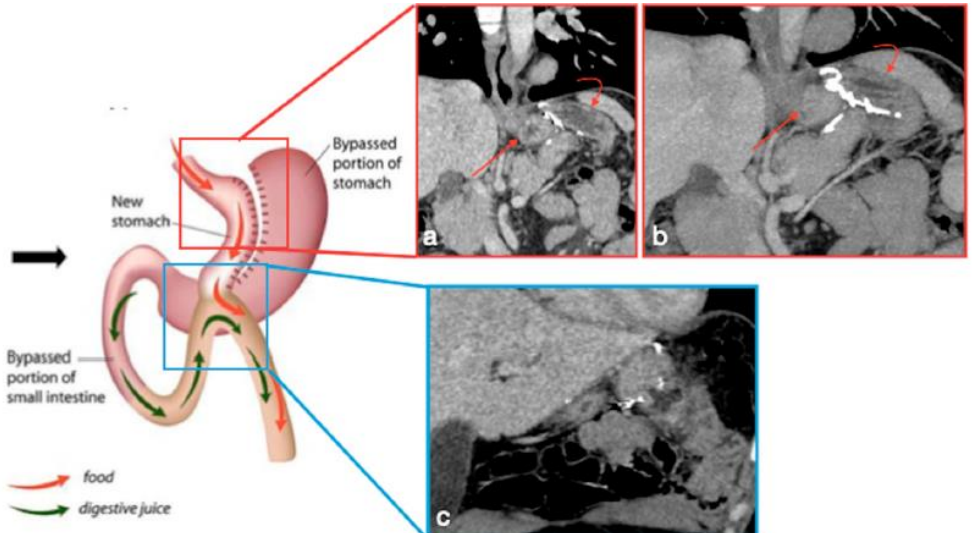
- *Bowel obstruction*

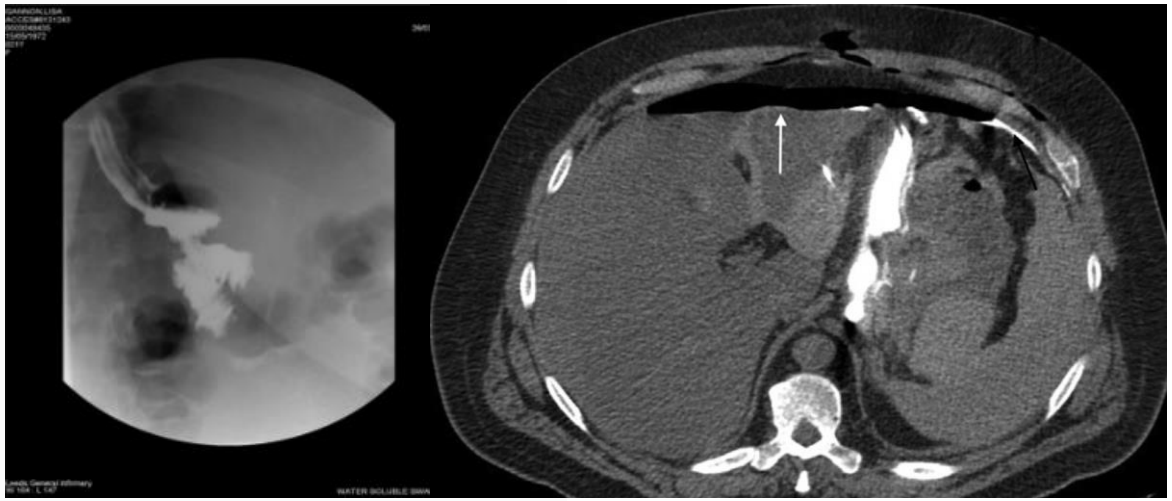
OAGB
Diagnosis of leakage

- *CT with oral contrast*
  - *Better to discern consequences of leaks (collections versus free fluid and air) and role out Bleeding – PE –pneumonia*

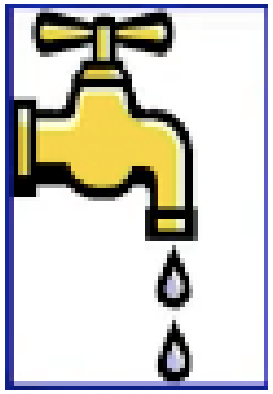
- *Endoscopy + fluoroscopy*

- *If in doubt consider diagnostic laparoscopy (Persistent > HR and pain)*





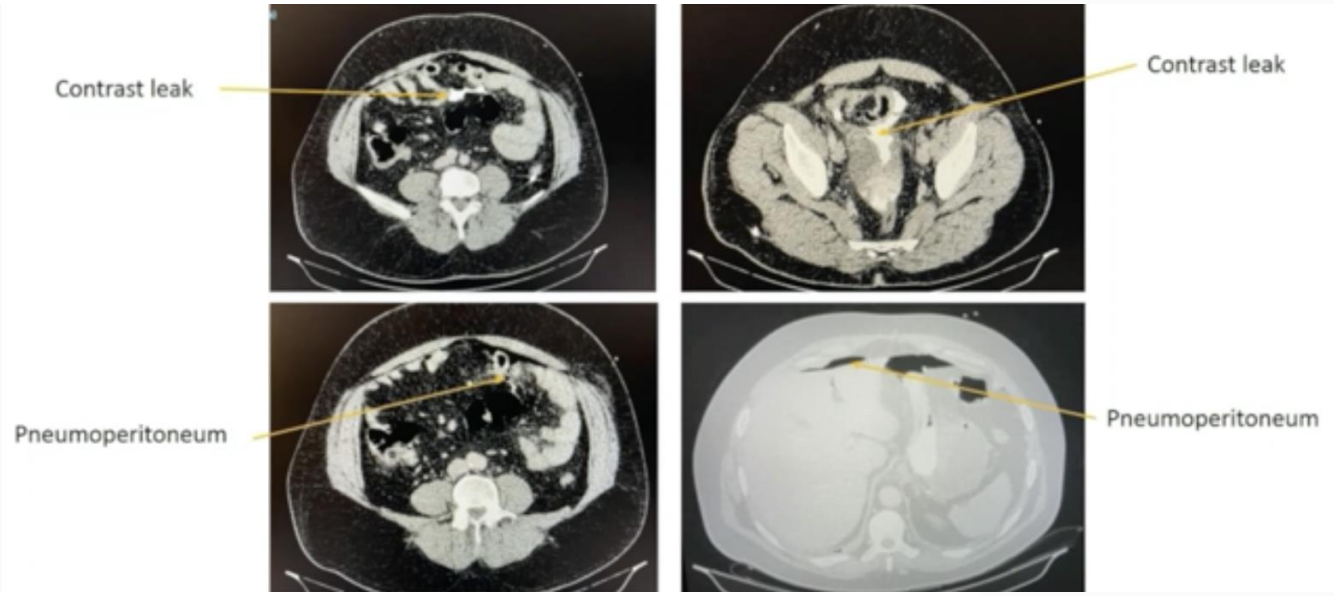
OAGB
Leak(?)

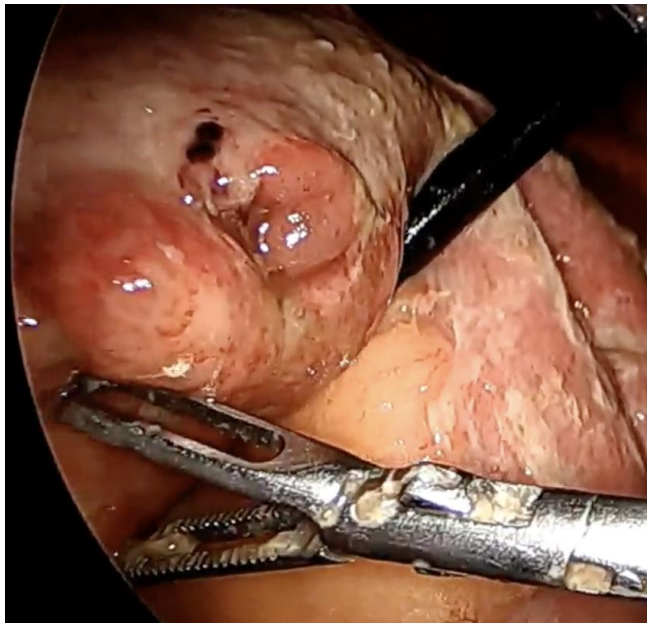


Missing Jejunal Perforation During Small Bowel Measurement in Patient Operated by Laparoscopic One-Anastomosis Gastric Bypass

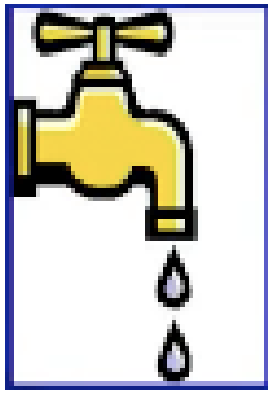
Obesity Surgery (2021) 31:2841–2842

Manuel Ferrer-Márquez[1] · Vanesa Maturana Ibáñez[2] · Francisco Rubio Gil[1] · María José Solvas Salmerón[1] · Maria José Torrente Sánchez[1] · Antonio Martínez.Amo-Gámez[3] · Manuel Ferrer-Ayza[1]





AOGB
Leak



In Hemodinamically stable pts

Rule out other cause for > HR

Bleeding
Hypovolemia
Pneumonia

CT scan with oral and ev contrast

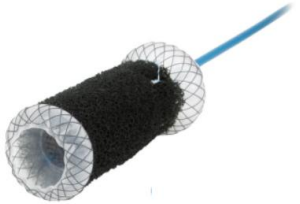
Diffuse peritonitis *go to OR*

Collection *Multidis app*

LEAK : Endoscopic treatment

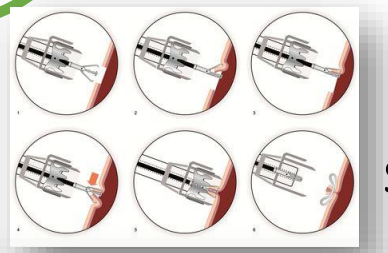
COVER

Suction+coverage

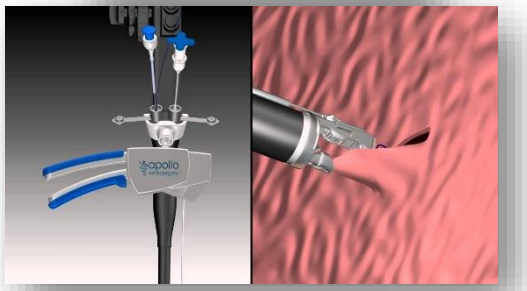


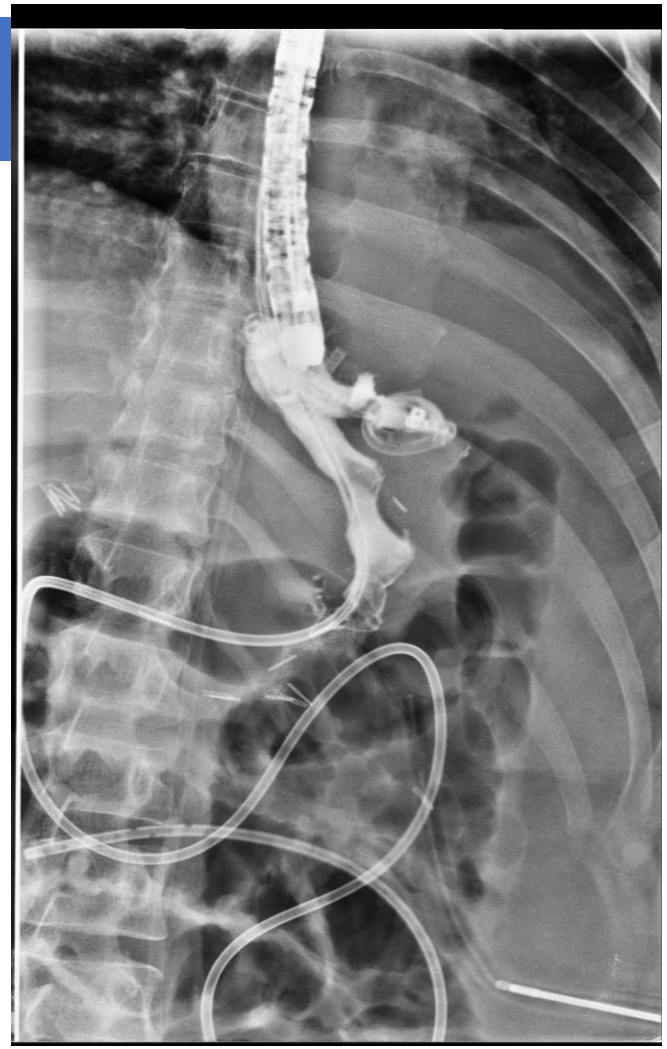
Combine more than 1 technique

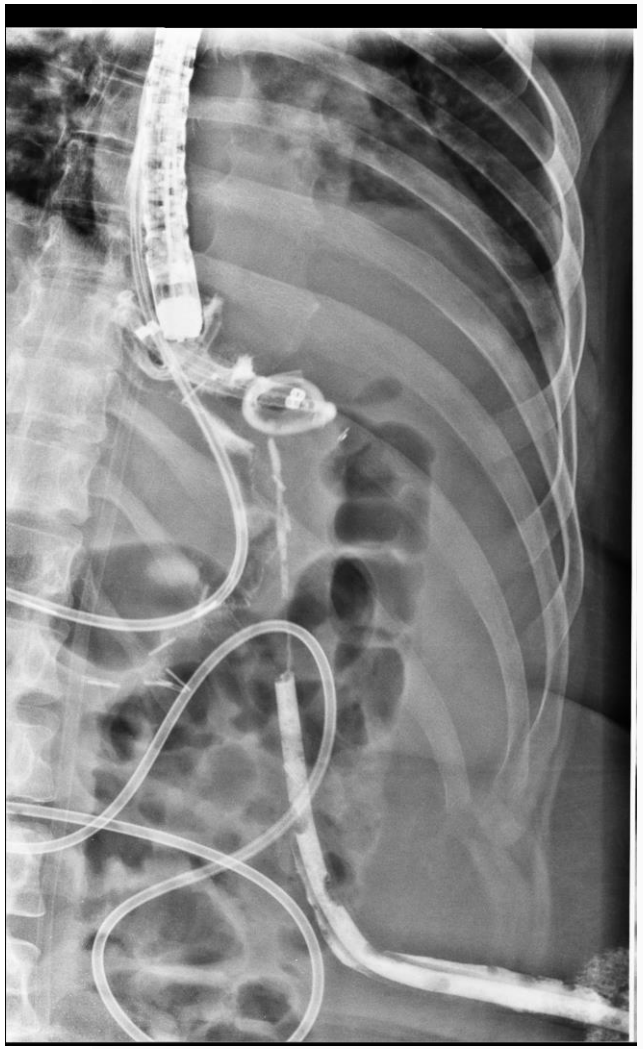
DRAIN

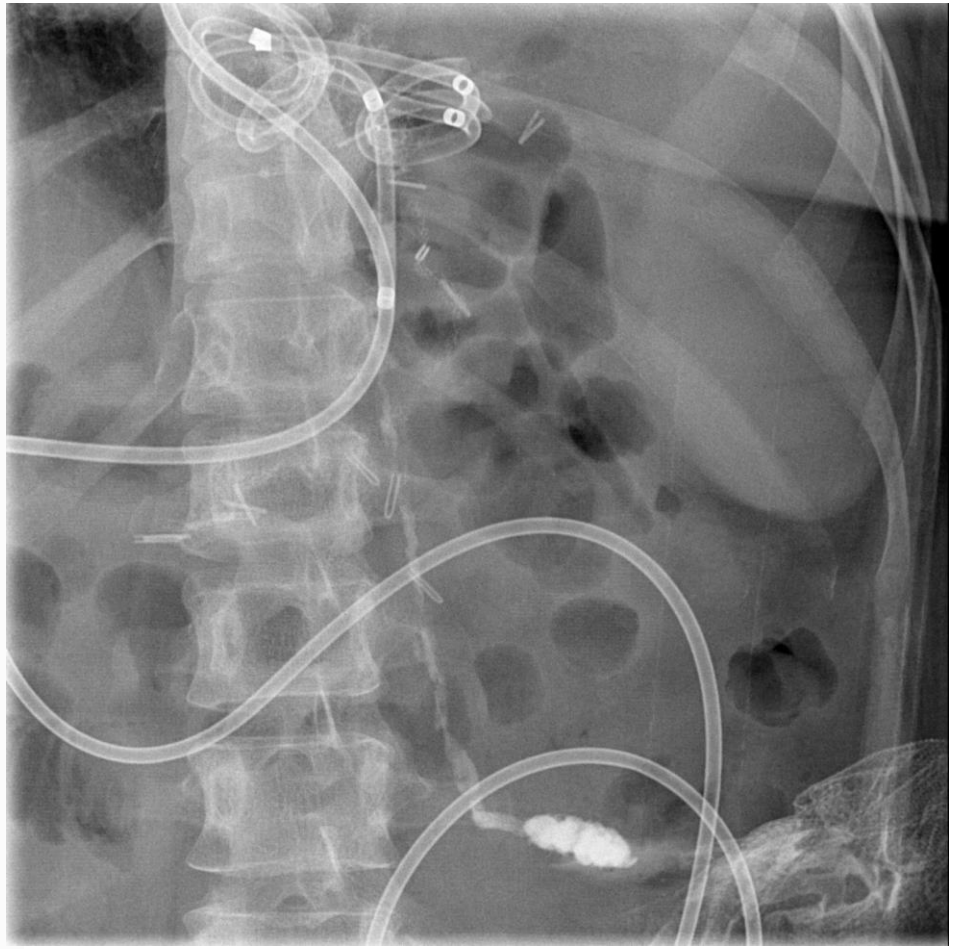


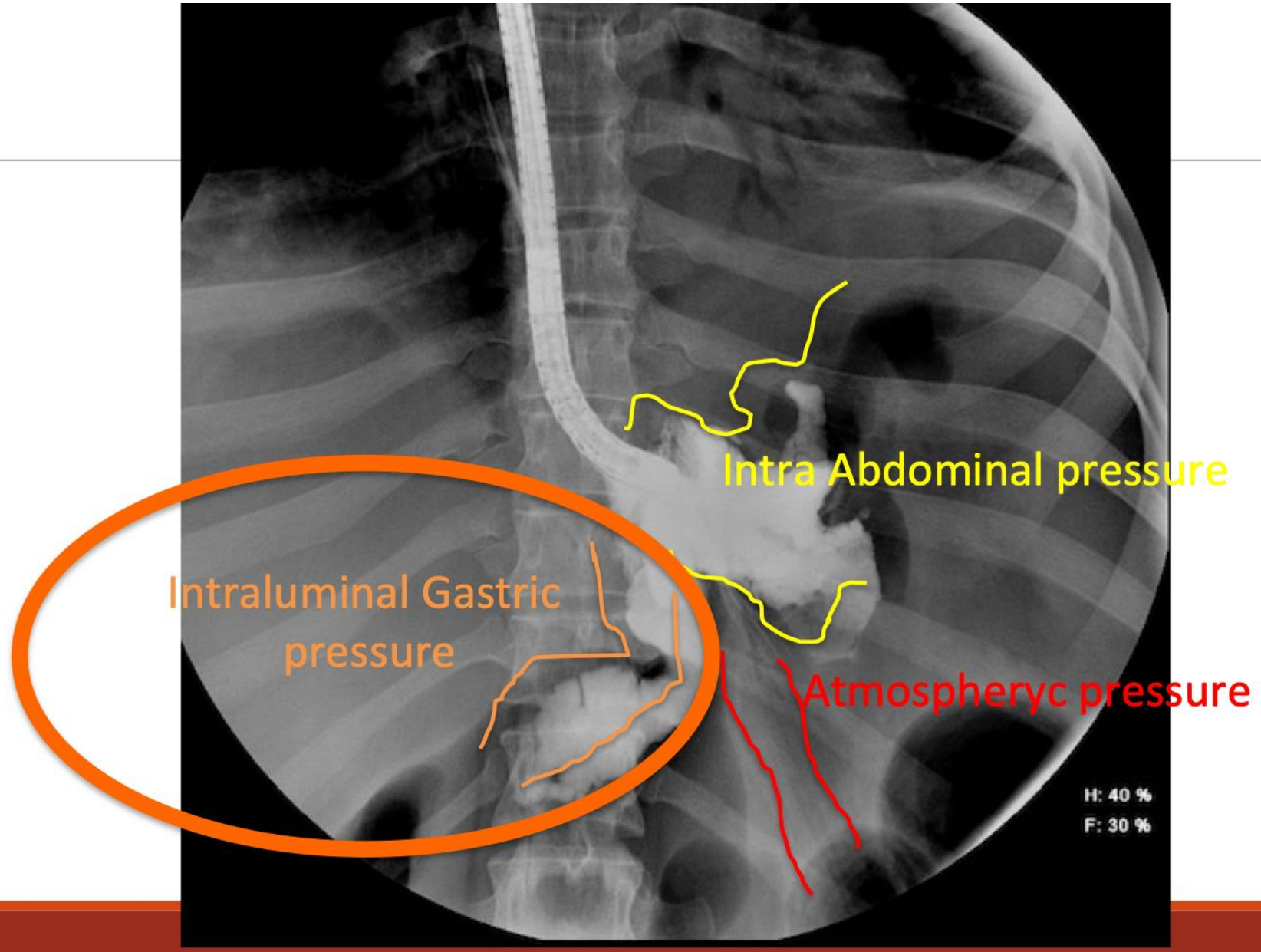
SEAL





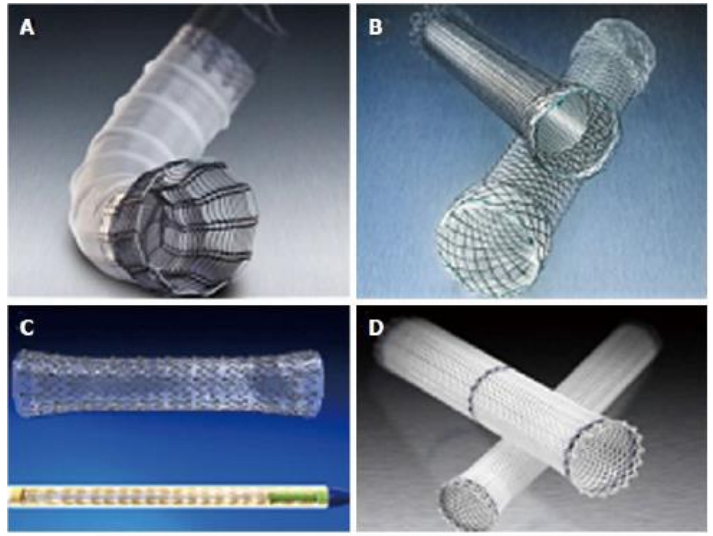


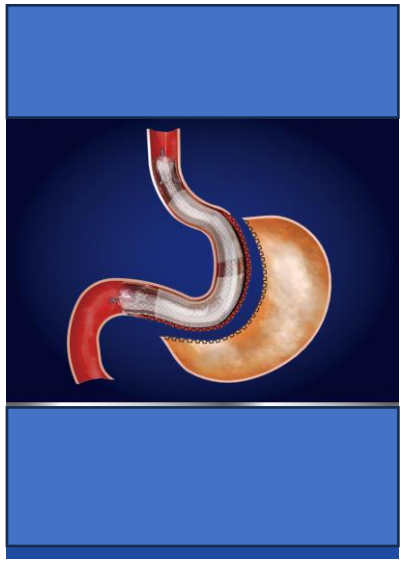




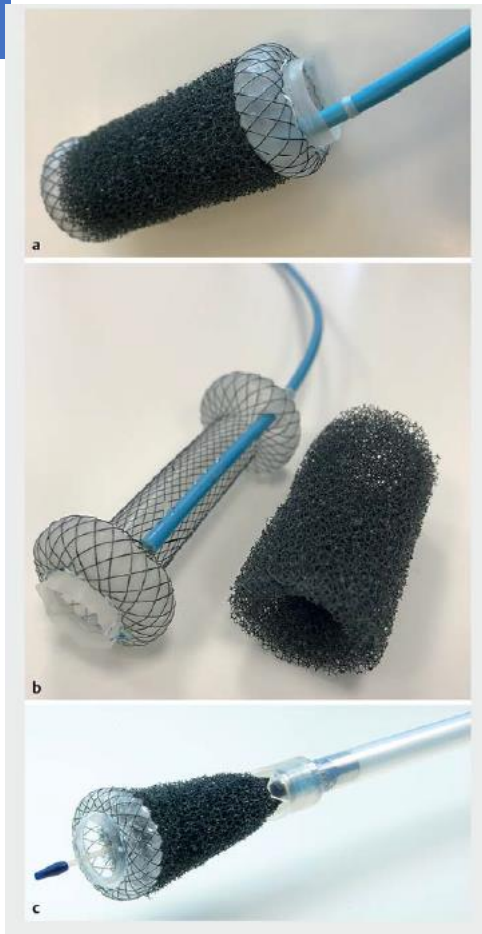
Donatelli, personal data

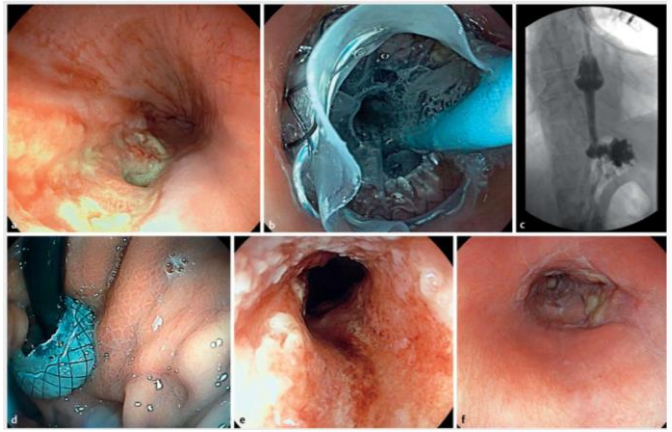
COVER

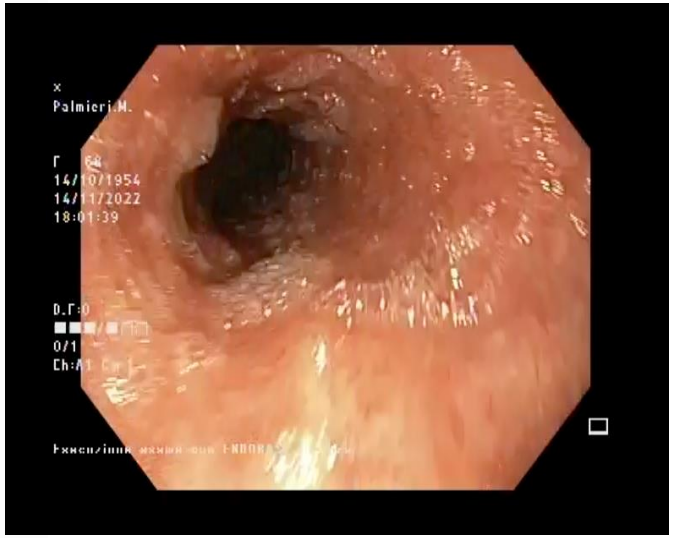




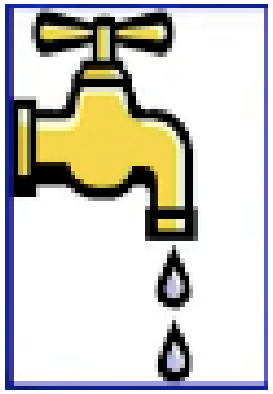
ENDOSCOPIC TREATMENT
Vacuum Stent







Bariatric complications
Leak



- *In Hemodinamically unstable pts*

Rule out MI and PE

- *Tachicardia (> 120 B/M)*
- *Dyspnea and hypoxia (SaO2<92%)*
- *Decrease in urine output (<30 ml/h)*
- *Fever >38.5 F*
- *Acidosis*
- *Worsening Abdominal pain*

Explore

OAGB
Bariatric damage control Principles

- *Rapid exploration*
- *Removal of contamination and ischemic tissue*
- *Identification of the source of probelm*
- *Ev. establishment of feeding access*
- *Maximize future options*

If there is a leak:

- *Placing closed suction drains to control the leak*

- *Closing the leak can be attempted but it is not required*
  - *Interrupted sutures and graham patch*
  - *Convertion in RYGBP*

OAGB
Acute abdomen

- *Leakage with/without diffuse peritonitis*

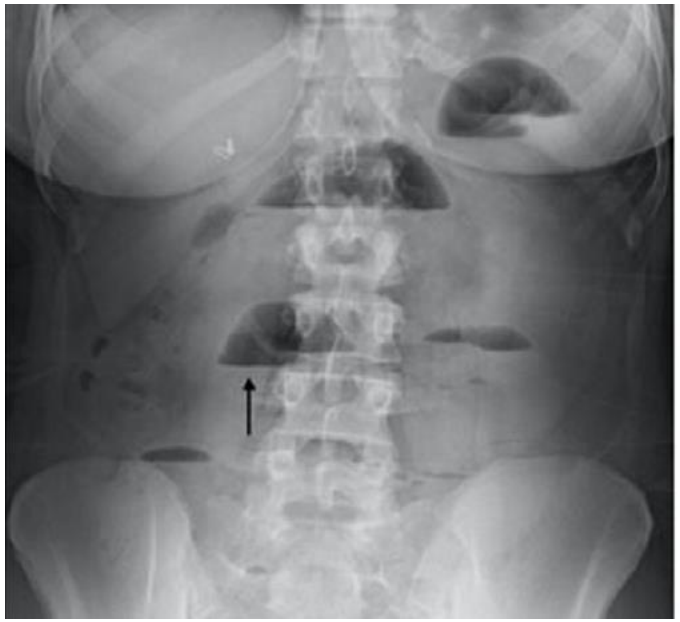
Bowel obstruction

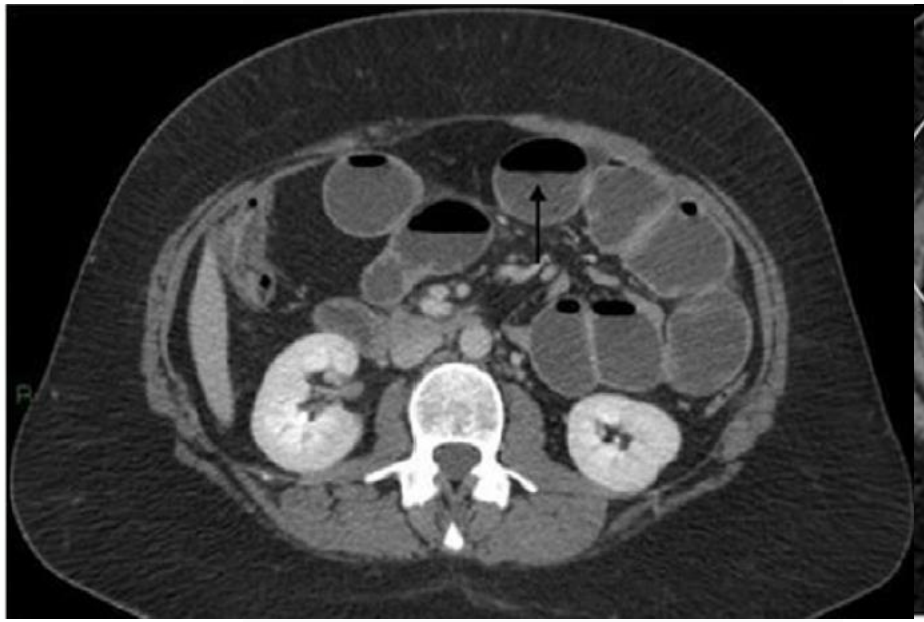
OAGB
Bowel obstruction

- *Incidence 1-4%*
- *Causes*
  - *Adhesions and volvulus*
  - *Abdo hernias or incisional hernias*
  - *Internal hernias*

OAGB
Bowel Obstruction

Adhesions

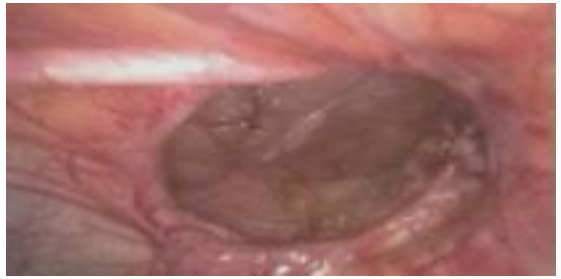




Volvulus

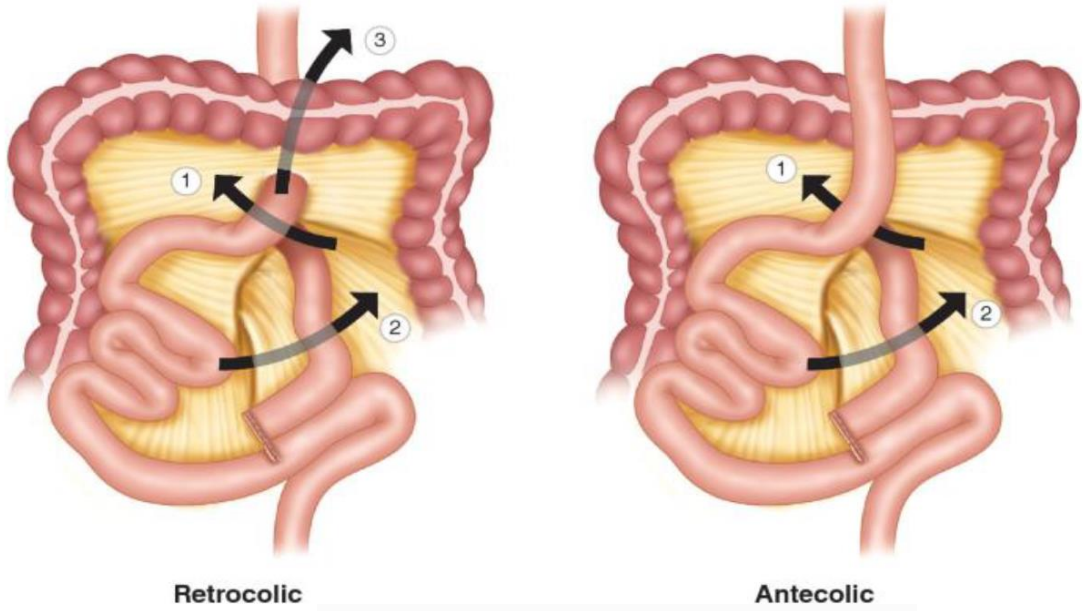
Bowel obstruction after OAGB
Abdominal wall hernia

- *pre-existing ventral hernia or new trocar site*



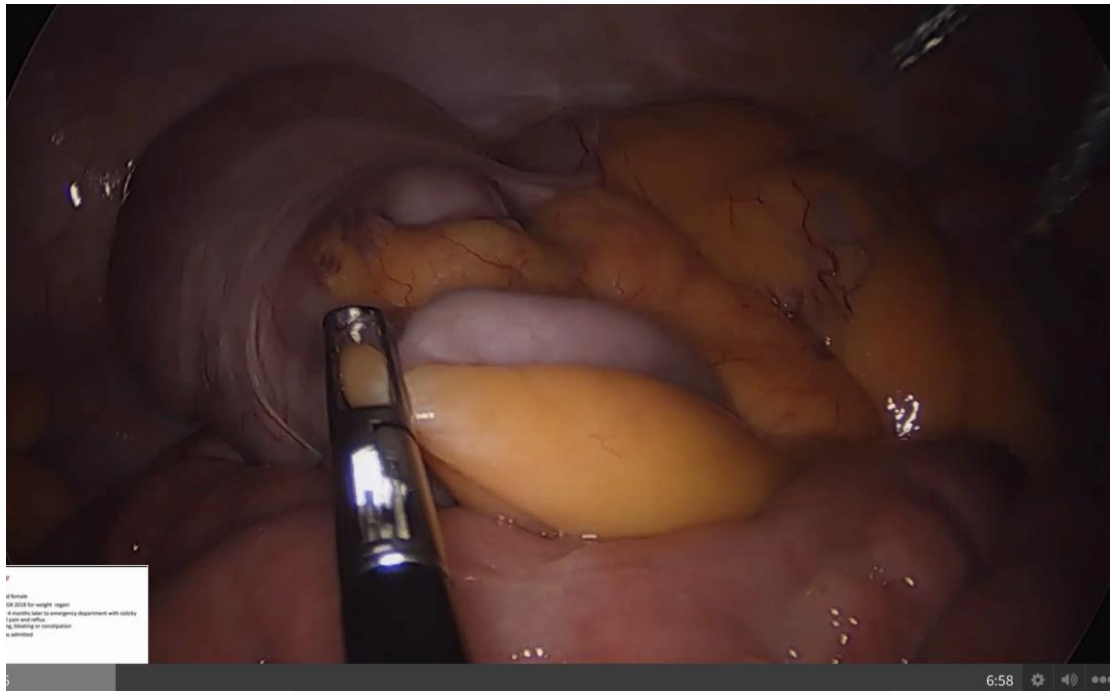
OAGB
IH

Retrocolic RYGB – Three mesenteric defects
Antecolic RYGB – Two mesenteric defects
OAGB – One mesenteric defect



OAGB
Internal hernia

- *Run entire small intestine*
- *Start at termial ileum and go retrograde*
- *Reposition small intestine*
- *Check and repair all defects*



Alwahhaj Khogeer[1]

Obesity Surgery (2021) 31:2839–2840

Bariatric Surgery - OAGB
Post-operative Complications

- *Peri-operative*
  - *Bleeding*
  - *Septic complications (leak, leak, leak)*
  - *Bowel Obstruction*

- *Long Term*
  - *Malnutrition*
  - *Marginal ulcer*

- *False acute abdomen*

Malnutrition Following One-Anastomosis Gastric Bypass: a Systematic Review

Obesity Surgery (2023) 33:4137–4146

Nanda Bandlamudi[1] · Guy Holt[1] · Yitka Graham[2,3,4,5] · Mary O'Kane[6] · Rishi Singhal[7] · Chetan Parmar[8] · Nasser Sakran[9,10] · Kamal Mahawar[2,3] · Sjaak Pouwels[11,12] · Sudha Potluri[13] · Brijesh Madhok[1]

Total	Total
49,991	446
	0.9%

Table 1 All the studies included in the review with sample size, incidence of malnutrition, and bilio-pancreatic limb lengths in centimetres. (BP, bilio-pancreatic; NR, not reported)

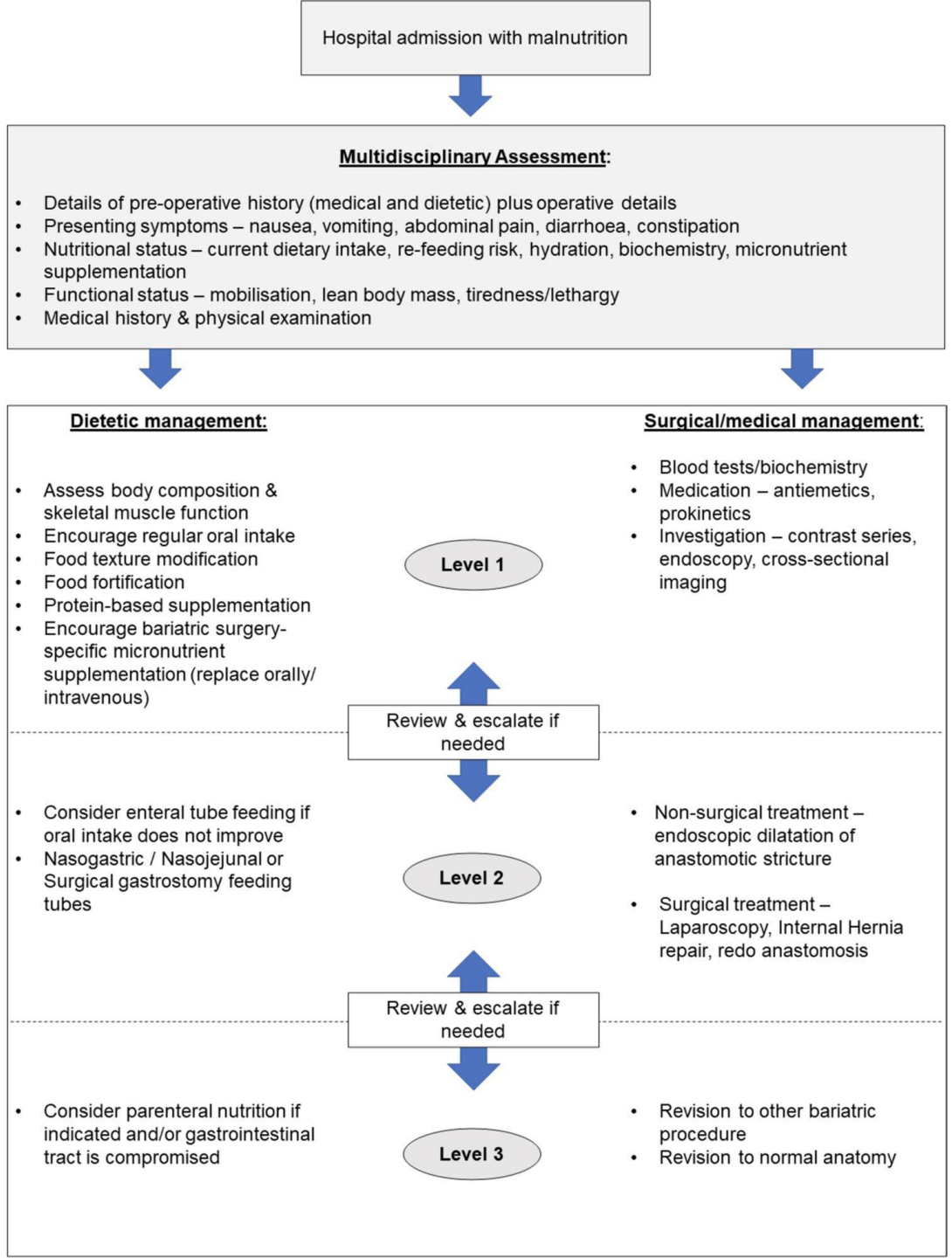
Article no	Author name	Year of publication	Type of study	Country of study	Sample size	Incidence of malnutrition	BP limb length
1	Bruzzi M	2019	Case report	France	1	1	200
2	Bruzzi M	2015	Retrospective analysis	France	126	2	200
3	Kermansaravi M	2017	Case report	Iran	1	1	200
4	Almuhanna M	2021	Retrospective analysis	Taiwan	2223	51	NR
5	Hussain A	2019	Retrospective analysis	UK	925	3	> 250
6	Kular K	2014	Retrospective analysis	India	1054	1	> 250
7	Cecile B	2016	Case series	France	280	7	200
8	Motamedi M	2017	Case report	Iran	1	1	200
9	Motamedi M	2017	Case report	Iran	1	1	200
10	Nimeri A	2017	Case report	Abu Dhabi	1	1	200
11	Nimeri A	2016	Case report	Abu Dhabi	1	1	200
12	Johnson W	2007	Retrospective analysis	USA	32	9	NR
13	Jammu G	2016	Retrospective analysis	India	473	5	NR
14	Khalaj A	2020	Retrospective analysis	Iran	989	9	150–200
15	Komaei I	2019	Retrospective analysis	Italy	64	3	200
16	Landreneau J	2019	Retrospective analysis	UAE	16	2	NR
17	Chevallier	2016	Letter to the editor	France	326	2	NR
18	Chen c	2016	Retrospective analysis	Taiwan	1583	23	200
19	Mussella M	2017	Retrospective analysis	Italy	2678	5	NR
20	Noun R	2012	Retrospective analysis	Lebanon	1000	4	NR
21	Elgeidie A	2020	Retrospective analysis	Egypt	692	17	NR
22	Soong T	2019	Retrospective analysis	Taiwan	940	9	NR
23	Ahuja A	2018	Retrospective analysis	India	101	4	150–250
24	Alligier M	2020	Case series	France	38	5	NR
25	Apers J	2018	Retrospective analysis	Netherlands	287	12	NR
26	Dang H	2009	Case report	USA	1	1	> 250
27	Benamro F	2020	Case report	India	1	1	150–200
28	Bhandari M	2019	Retrospective analysis	India	90	2	200–250
29	Carbajao M	2016	Retrospective analysis	Spain	1200	17	NR
30	Pernar L	2016	Retrospective analysis	USA	1	1	NR
31	Poghosyan T	2016	Retrospective analysis	France	17	10	NR
32	Navarette S	2018	Retrospective analysis	Venezuela	100	1	NR
33	Robert M	2019	Randomised control trail	France	129	9	200
34	Ruiz-Tovar J	2019	Retrospective analysis	Spain	300	3	NR
35	Rutledge R	2005	Retrospective analysis	USA	2410	43	NR
36	Genser L	2017	Retrospective analysis	France	2934	26	NR
37	Chen C	2019	Retrospective analysis	Taiwan	1022	12	NR
38	Reche F	2016	Case report	France	1	1	NR
39	Carandina S	2021	Retrospective analysis	France	560	14	200
40	Goel R	2020	Retrospective analysis	India	11,568	6	NR
41	Haddad A	2020	Case report	Jordan	1	1	> 250
42	Jedamzik J	2021	Retrospective analysis	Austria	1025	9	150–250
43	Maralani M	2020	Retrospective analysis	Iran	805	2	150–200
44	Tasdighi E	2021	Retrospective analysis	Iran	209	6	150–200
45	Abu-Abeid A	2022	Retrospective analysis	Israel	1425	10	150–250
46	Liagre A	2022	Retrospective analysis	France	405	3	150
47	Musella M	2022	Retrospective analysis	Italy	8676	16	NR
48	Soprani A	2022	Retrospective analysis	France	3046	63	NR
49	Tasdighi E	2021	Retrospective analysis	Iran	209	7	150–200
50	Antonopulos C	2022	Retrospective analysis	France	23	3	NR

A total of 250 (56%) patients underwent revision of OAGB due to malnutrition. The most common surgical intervention was reversal of OAGB to normal anatomy in 126 (28.2%) patients. This was followed by revision of OAGB to SG in 46 (10.3%) patients and OAGB to RYGB configuration in 41 (9.2%) patients.

Malnutrition Following One-Anastomosis Gastric Bypass: a Systematic Review

Obesity Surgery (2023) 33:4137–4146

Nanda Bandlamudi[1] · Guy Holt[1] · Yitka Graham[2,3,4,5] · Mary O'Kane[6] · Rishi Singhal[7] · Chetan Parmar[8] · Nasser Sakran[9,10] · Kamal Mahawar[2,3] · Sjaak Pouwels[11,12] · Sudha Potluri[13] · Brijesh Madhok[1]



Bariatric Surgery - OAGB
Post-operative Complications

- *Peri-operative*
  - *Bleeding*
  - *Septic complications (leak, leak, leak)*
  - *Bowel Obstruction*

- *Long Term*
  - *Malnutrition*
  - *Marginal ulcer*

- *False acute abdomen*

ASMBS guidelines/statements

ASMBS literature review on the treatment of marginal ulcers after metabolic and bariatric surgery

R. Wesley Vosburg, M.D.[a,*], Abdelrahman Nimeri, M.D.[b], Dan Azagury, M.D.[c], Brandon Grover, M.D.[d], Sabrena Noria, M.D.[e], Pavlos Papasavas, M.D.[f], Jonathan Carter, M.D.[g]

Surgery for Obesity and Related Diseases 21 (2025) 1–8

0-8%

Symptoms of MU:
Pain, dysphagia, poor appetite, nausea, vomiting

EGD to confirm MU

No MU visualized:
Test for H. pylori and treat if positive

MU visualized:
Remove staples or non-absorbable suture if seen at ulcer base
Continue medical treatment

Start treatment and modify risk factors:
High dose PPI with open capsules, +/- sucralfate
(H2 blocker if allergy to PPI)

Repeat EGD in 8-12 weeks

No MU seen:
Prophylactic PPI for 6-12 months

Endoscopic Treatments for Marginal Ulcer

-GJA > 12 mm, Endoscopic Oversewing of marginal ulceration
-GJA < 12 mm, Endoscopic stent placement

Improving MU:
Continue with medical treatment
Repeat EGD in 8-12 weeks

Consider surgical treatment if not healed by 12 months
Consider life-time PPI prophylaxis

Modified

Endoscopic Management of Recalcitrant Marginal Ulcers by Covering the Ulcer Bed

Obesity Surgery (2018) 28:2252–2260

Sindhu Barola[1] · Lea Fayad[1] · Christine Hill[2] · Thomas Magnuson[3] · Michael Schweitzer[3] · Vikesh Singh[1] · Yen-I Chen[1] · Saowanee Ngamruengphong[1] · Mouen A. Khashab[1] · Anthony N. Kalloo[1] · Vivek Kumbhari[1]

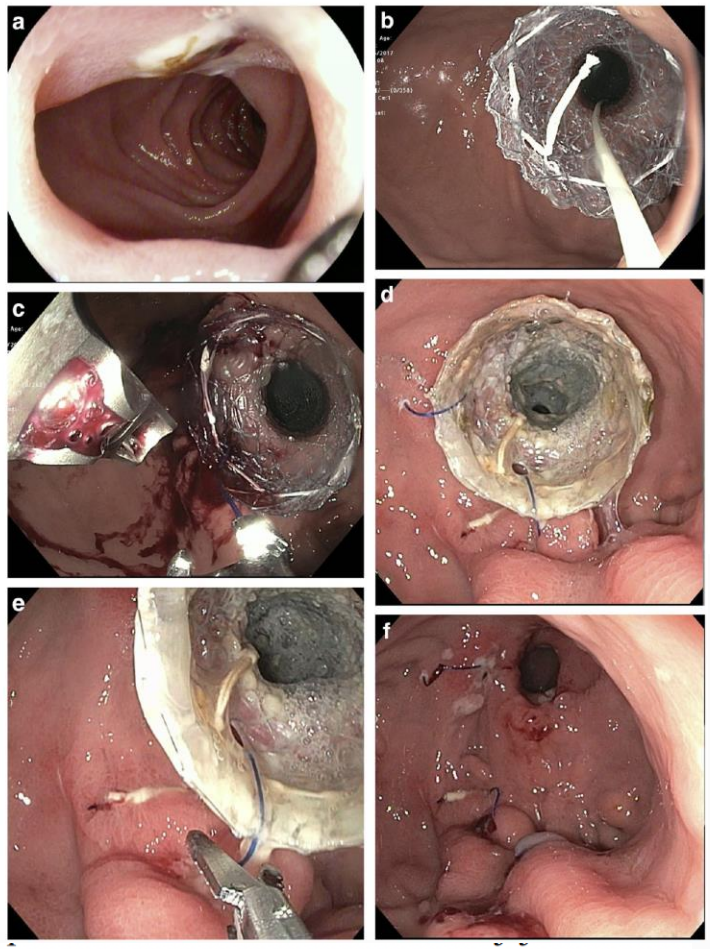


Fig. 3 Results from patient 5: marginal ulcer treated with FCSEMS deployment. **a** Endoscopic view showing marginal ulceration before stent deployment. **b** Endoscopic view of deployment of a fully covered self-expandable metallic stent. **c** Procedure of securing fully covered self-expandable metallic stent with a suture. **d** Endoscopic view of stent 6 weeks after procedure. **e** Procedure of cutting the sutures with endoscopic scissors. f. Endoscopic view 6 weeks after procedure showing a well-healed ulcer

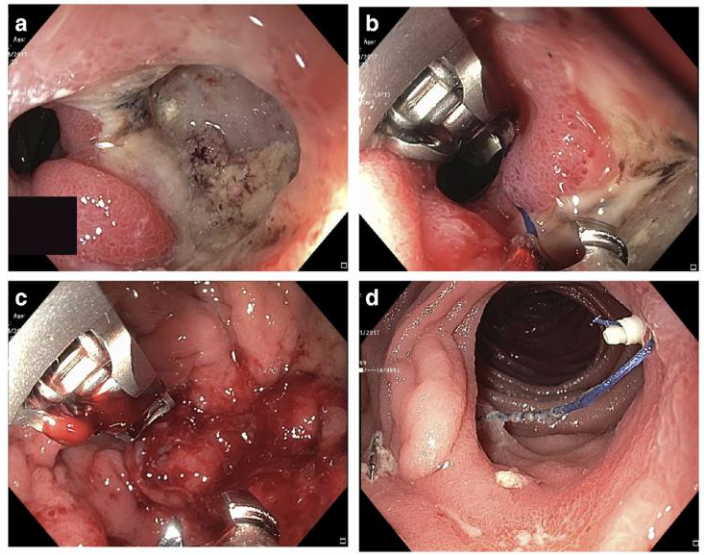


Fig. 4 Results from patient 2: marginal ulcer treated with endoscopic suturing **a** Endoscopic view showing marginal ulceration before endoscopic suturing. **b** Demonstration of endoscopic suturing of marginal ulceration. **c** Endoscopic view showing marginal ulceration immediately after oversewing was completed. **d** Endoscopic view 6 weeks after procedure showing a well-healed ulcer

18 × 80-mm through-the-scope FCSEMS (Niti-S Taeowoong, Korea) was deployed across the gastric outlet. (Fig. 3). The

Table 2 Procedural details of the endoscopic management of ulcer

Serial no.	Number of ulcers	Size	Foreign body removal	GJ diameter	Therapeutic technique (ES-Endoscopic suturing/ and FCSEMS deployment)	Technical success	Adverse Events
1.	2	6 mm, 10 mm	Staples were removed	≥12 mm	ES	Yes	No
2.	2	15 mm 10 mm	–	≥12 mm	ES and FCSEMS deployment	Yes	No
3.	1	15 mm	–	≥12 mm	ES	Yes	No
4.	2	10 mm 10 mm	–	≥12 mm	ES	Yes	No
5.	1	12 mm	–	<12 mm	FCSEMS deployment	Yes	No
6.	2	10 mm, 4 mm	–	<12 mm	FCSEMS deployment	Yes	No
7.	3	10 mm 10 mm 10 mm	–	≥12 mm	ES	Yes	No
8.	1	5 mm	Staples were removed	≥12 mm	ES FCSEMS deployment	Yes	No
9.	3	15 mm, 5 mm, 15 mm	Staples were removed	≥12 mm	ES	Yes	No
10.	2	15 mm, 15 mm	–	≥12 mm	ES	Yes	No
11.	1	20 mm	Staples were removed	≥12 mm	ES	Yes	No

GJ gastrojejunal anastomosis, *MU* marginal ulcer, *ES* endoscopic suturing, *FCSEMS* fully covered self-expandable esophageal stent

Revision/Conversion Surgeries After One Anastomosis Gastric Bypass—An Experts' Modified Delphi Consensus

Obesity Surgery (2024) 34:2399–2410

Mohammad Kermansaravi[1] · Sonja Chiappetta[2] · Chetan Parmar[3] · Miguel A. Carbajo[4] · Mario Musella[5] · Jean-Marc Chevallier[6] · Rui Ribeiro[7] · Almino C. Ramos[8] · Rudolf Weiner[9] · Abdelrahman Nimeri[10] · Edo Aarts[11] · Syed Imran Abbas[12] · Ahmad Bashir[13] · Estuardo Behrens[14] · Helmuth Billy[15] · Ricardo V. Cohen[16] · Daniel Caina[17] · Maurizio De Luca[18] · Bruno Dillemans[19] · Mathias A. L. Fobi[20] · Manoel Galvao Neto[21] · Khaled Gawdat[22] · Mohamad Hayssam ElFawal[23] · Kazunori Kasama[24] · Radwan Kassir[25] · Amir Khan[26] · Lilian Kow[27] · Kul Deepak Singh Kular[28] · Muffazal Lakdawala[29] · Laurent Layani[30] · Wei-Jei Lee[31] · Enrique Luque-de-León[32] · Kamal Mahawar[33] · Hazem Almomani[34] · Karl Miller[35] · Juan Carlos Olivares González[36] · Arun Prasad[37] · Karl Rheinwalt[38] · Robert Rutledge[39] · Bassem Safadi[40] · Paulina Salminen[41] · Asim Shabbir[42] · Halit Eren Taskin[43] · Jose Sergio Verboonen[44] · Ramon Vilallonga[45] · Cunchuan Wang[46] · Scott A. Shikora[10] · Gerhard Prager[47]

Persistent Marginal Ulcer

0.5-6%

Marginal ulcer can occur in OAGB which in the majority of cases is managed successfully by conservative management [50]. However, in case of failure of conservative management, the experts agreed that resection of the GJ including the distal part of the gastric pouch and conversion to RYGB or complete reversal to normal anatomy are acceptable options. There was no consensus that in such a scenario conversion to SG should be done. The experts agreed that simple repair of MU after debridement plus truncal vagotomy or addition of life-long PPI or endoscopic oversewing of the MU is not advisable for resistant MU [51].

CONCLUSIONS

- Low incidence of p.o. complications
- Central role for multidisciplinary team
- Education is the key

SCUOLA DI FORMAZIONE SICOB PER LA GESTIONE DEL PAZIENTE BARIATRICO AREA PSICOLOGIA E PSICHIATRIA

Corso Nazionale - Crediti ECM 50

Presidente E. Paone

Formazione sul Campo, 09 febbraio - 31 ottobre 2025

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Corso Nazionale - Crediti ECM 50

Presidente I. Grandone

Formazione sul Campo, 09 febbraio - 31 ottobre 2025

Sito web | Iscrizione Online | Programma

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Corso Nazionale - Crediti ECM 50

Presidente G. Navarra

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U. PARINI - CORSO DI ALTA FORMAZIONE IN CHIRURGIA DELL'OBESITÀ E METABOLICA

Corso Nazionale - Crediti ECM 50

Presidente C. Giardiello - M. Raffaelli

Formazione sul Campo, 09 febbraio - 31 ottobre 2025

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SCUOLA DI FORMAZIONE IN ENDOSCOPIA BARIATRICA

Corso Nazionale - Crediti ECM 50

Presidente Galasso - Galloro

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