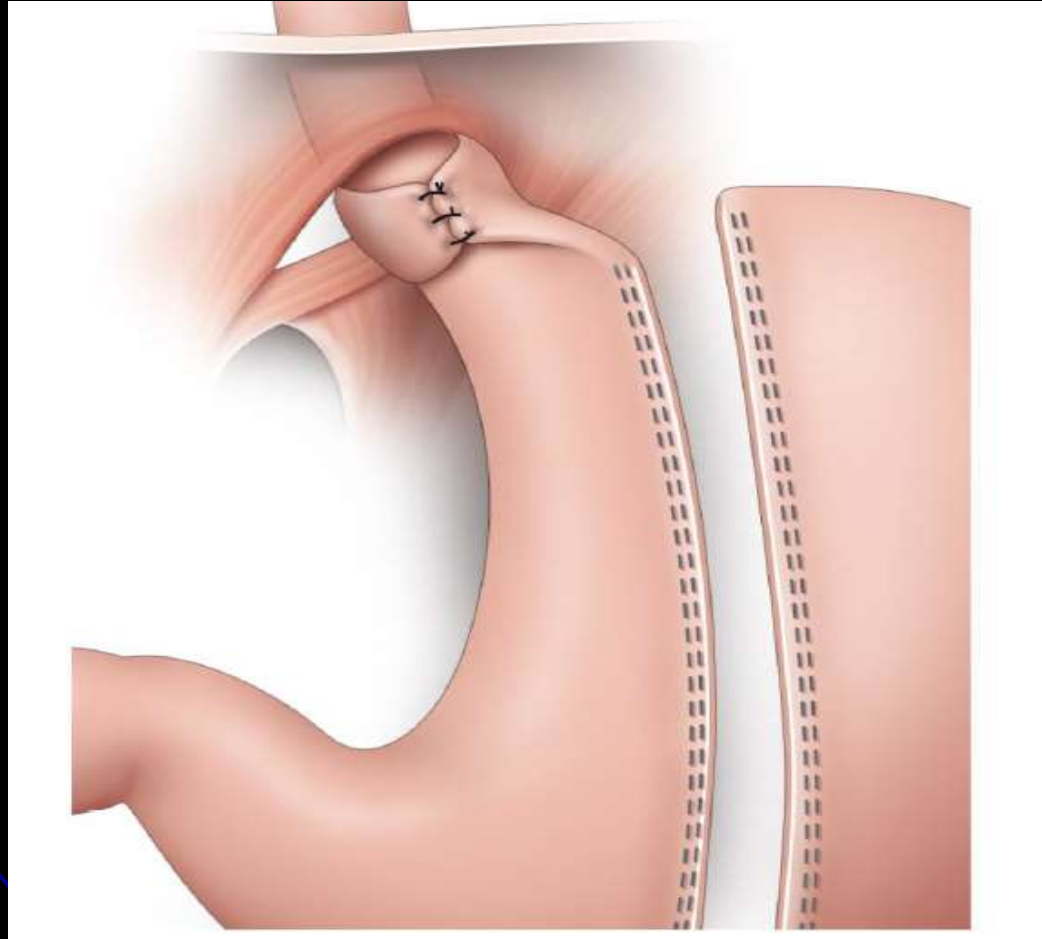


NISSEN SLEEVE GASTRECTOMY

Prevention and management of complications



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Montpellier University Hospital, FRANCE.

DISCLOSURES

RESEARCH

PROWELL, BODYNOV, JOHNSON&JOHNSON

PATTENT

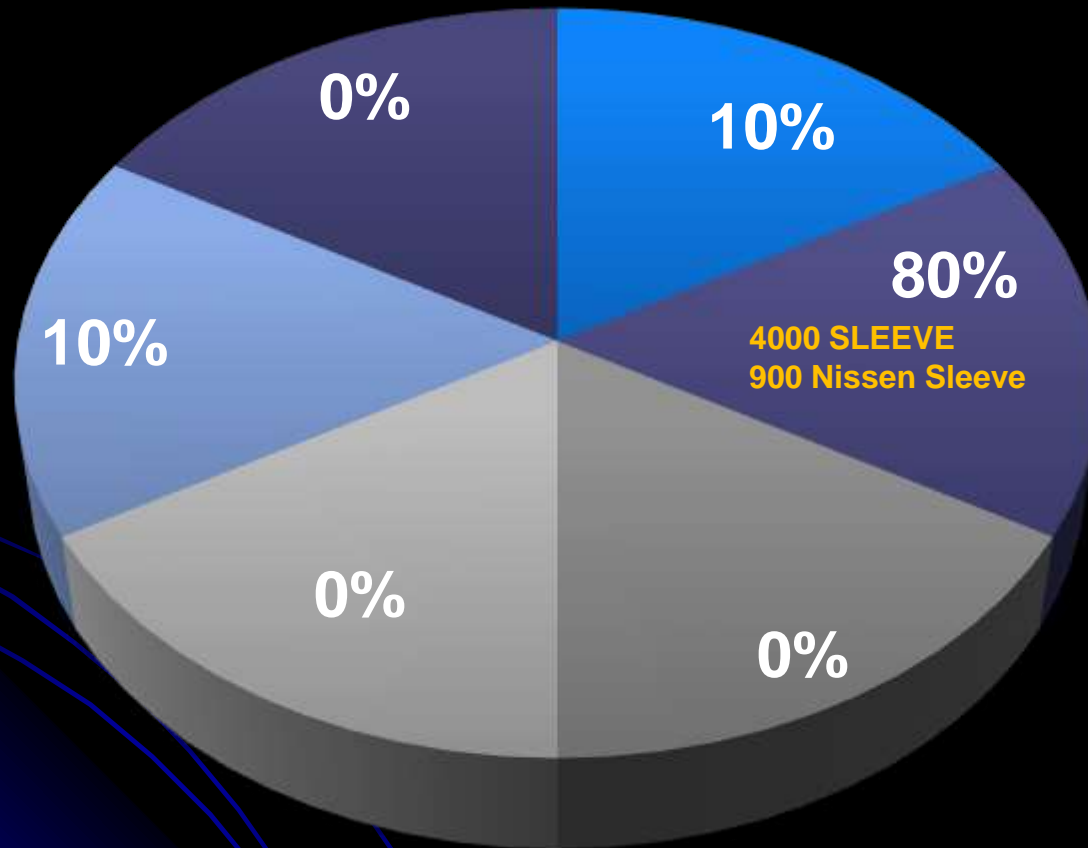
MID

CONSULTANT/SPEAKER

ETHICON, APPLIED, WL GORE, NOVO NORDISK,
EZISURG, REACH SURGICAL



Case Mix Disclosure



RYGB

SG

OAGB

DS/SADI-S

REVISIONAL

ENDOSCOPIC

BACKGROUND

- 2010: First Sleeve performed without Nissen wrap removal.
- 2016: Publication of Nissen Sleeve preliminary results

Nissen Sleeve (N-Sleeve) operation: preliminary results of a pilot study

David Nocca, M.D., Ph.D.^{a,b}, El Mehdi Skalli, M.D.^a, Eric Boulay, M.D.^a,
Marius Nedelcu, M.D.^a, Jean Michel Fabre, M.D., Ph.D.^{a,b}, Marcelo Loureiro, M.D., Ph.D.^{a,b,c,*}

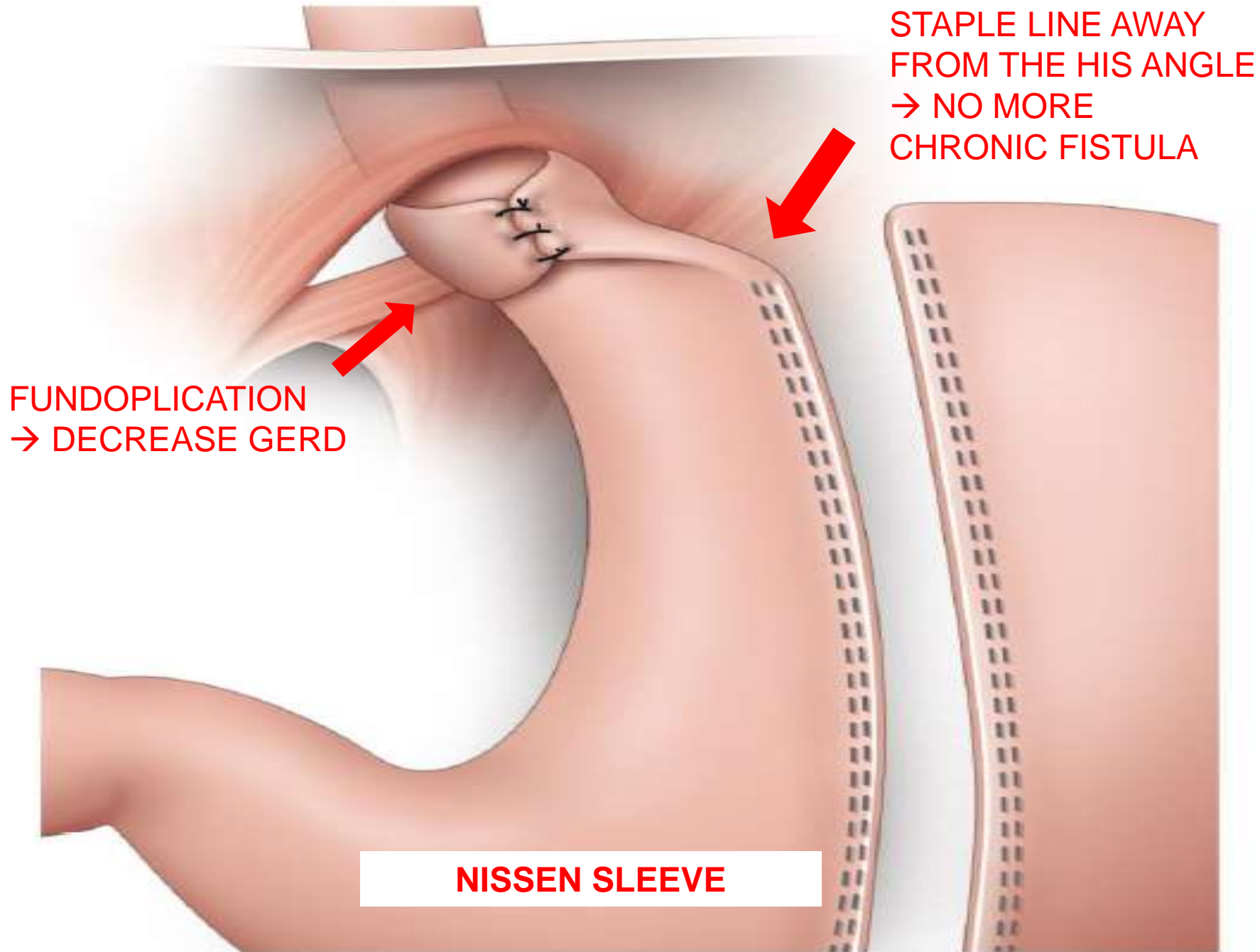
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Received December 29, 2015; accepted February 14, 2016

SURGERY FOR OBESITY
AND RELATED DISEASES



FUNDOPLICATION
→ DECREASE GERD

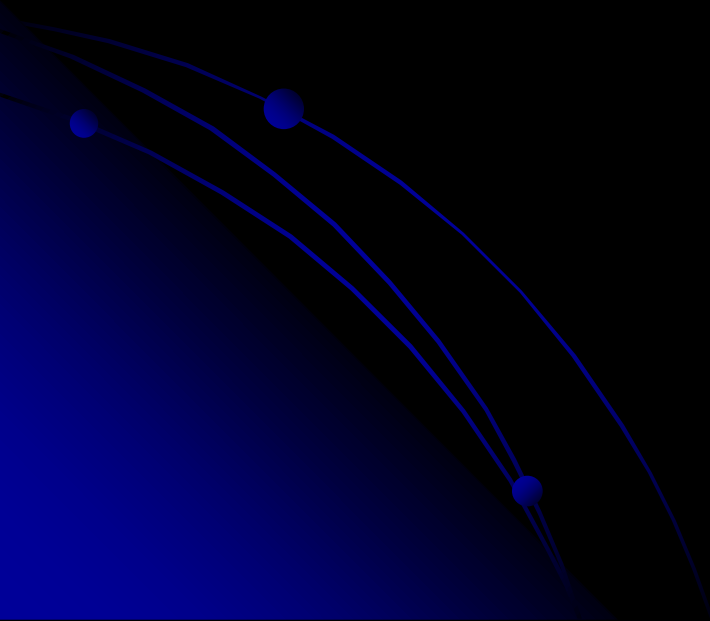
STAPLE LINE AWAY
FROM THE HIS ANGLE
→ NO MORE
CHRONIC FISTULA

NISSEN SLEEVE

TECHNICAL ASPECTS



NISSEN SLEEVE GASTRECTOMY RESULTS



% EWL AT 5 YEARS

124 PATIENTS (FOLLOW UP 75%)

JAN 2018-MARCH 2019

Average EWL at 5 years : 60 %

Successful outcome of NSleeve at 5 years [%EWL >50%]: 63%

Fail of Nsleeve at 5 years [%EWL <20%] : 11,5%

GASTRO-OESOPHAGEAL REFLUX CLINICAL SYMPTOMATOLOGY AND PPI TREATMENT

Presence of GERD clinical symptoms

- Preop: 54,95% (N = 50p.)
- 5 years: 12% (N= 6p.)

88% of patients with Preoperative GERD symptoms :
→ Complete Remission at 5 years

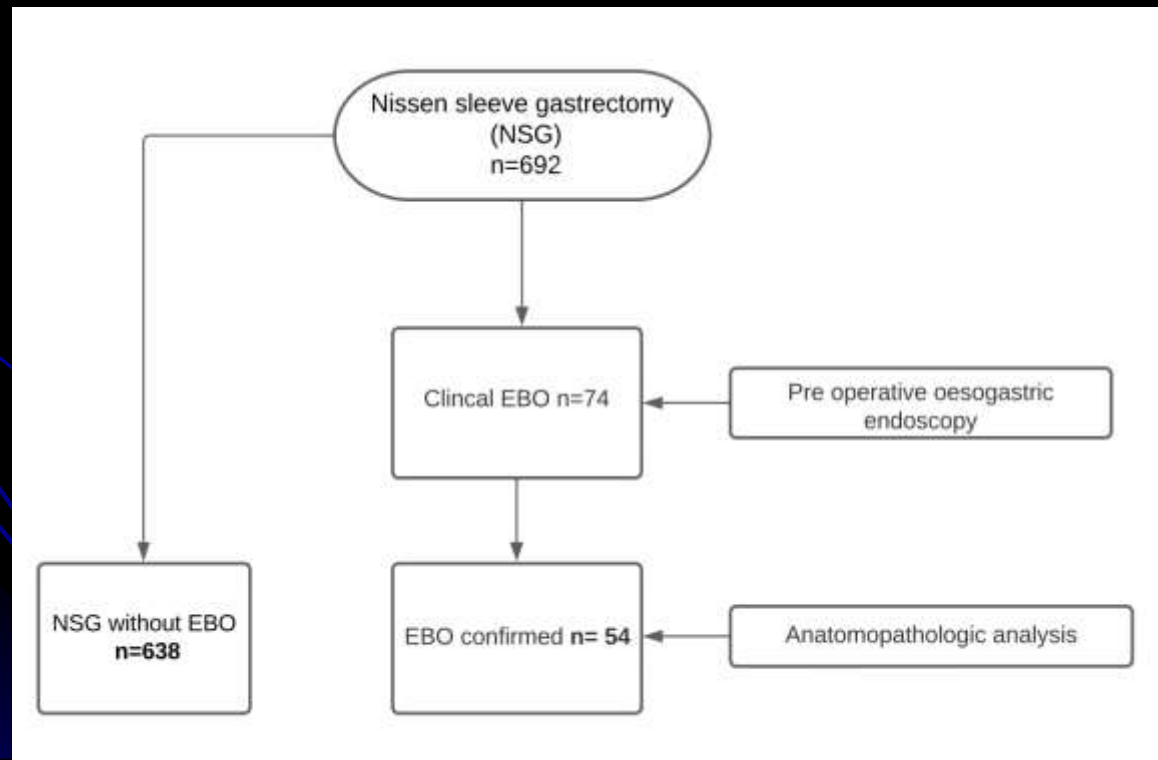
3.3 % GERD de novo at 5 years



Impact of Nissen Sleeve gastrectomy (NSG) on Barrett's oesophagus (BE) healing

Brinas P, Joumaa S, Donici D, Nocca D. Montpellier University Hospital

- Retrospective observationnal, two centers
- NSG performed on 692 patients from september 2013 to january 2021.
- All patients had a pre operative Esophagogastroduodenoscopy (EGD)
- All patient had an EGD between 1-2 years post op and 3-5years post op
- BE was systematically diagnosed on anathomopathologic findings.

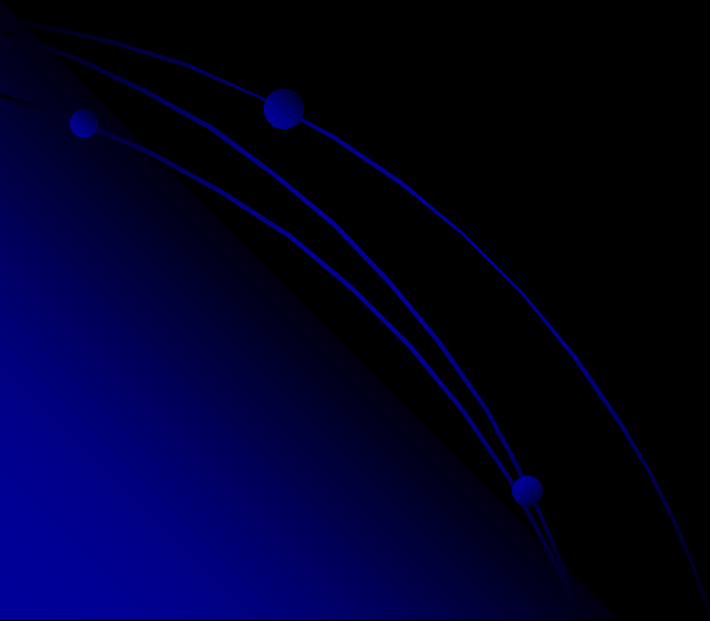


RESULTS

- 54 patients had a true BE (7,8% of all patients in the study)
- 41 patients (75,9%) had gastric metaplasia, 10 patients (18,5%) had intestinal metaplasia
- 38 patients had an EGD at 1-2 years post op. 27,8% of patients were lost to follow up
BE was healed in 64,1% (25 patients)
- 1 patient developed an oesophageal adenocarcinoma at 6,5 years (but wrap was reopened)
- Indicence rate of BE post NSG was nil at 1-2years

Conclusion : NSG could be an answer for patients with BE refusing a gastric bypass

NISSEN SLEEVE GASTRECTOMY MORBIDITY





ORIGINAL CONTRIBUTIONS

Peri-operative Morbidity of Nissen Sleeve Gastrectomy: Prospective Evaluation of a Cohort of 365 Patients, Beyond the Learning Curve

David Nocca^{1,2} · Florence Galtier^{1,3} · Sulaiman Taleb¹ · Marie-Christine Picot^{2,3,4} · Audrey Jausset⁴ · Marta Silvestri⁵ · Patrick Lefebvre¹ · Audrey de Jong¹ · Thomas Gautier⁶ · Marcelo Loureiro^{1,7} · Marius Nedelcu^{8,9} 

- 365 patients (Jan 2018-Sept 2020) → Nissen Sleeve
- 21 cases (5,7%) → Sleeve (technical difficulties, GIST)
- Age: 41,2 years
- BMI: 41,8 kg/m²
- GERD: 44%
- Barretts: 3,8%



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EARLY POSTOPERATIVE COMPLICATIONS: 4,4%

(<30 days, Dindo-Clavien>3)

NON SPECIFIC COMPLICATIONS:

- Bleeding (1,4%)
- Incarcerated umbilical hernia (0,3%)
- Atelectasia and pulmonary embolism (0,5%)

SPECIFIC COMPLICATIONS:

- Wrap perforations (1,6%)
- Wrap dilatation (0,3%): → necrosis of the wrap
- Severe Dysphagia (0,3%) → Wrap removal

NISSEN SLEEVE GASTRECTOMY SPECIFIC COMPLICATIONS

Pr D.Nocca
CHU Montpellier France

WRAP PERFORATION

- MORE FREQUENT COMPLICATION: 1 à 4%
- LEARNING CURVE+++
- REASON:
 - Fundus injury during the procedure (thermic, grasper..)
- RISK FACTORS:
 - Age, smokers, gastritis, LAGB, cardiovascular disease;
- CLINICAL WARNING SIGNS:
 - Aphagia, tachycardia, dyspnée, fever, abdominal pain.
- MANAGEMENT: EMERGENCY!
 - Wrap removal and drainage
 - Suture of the perforation (rare)

LATE PERFORATIONS

- PERFORATION AFTER GASTROTOXIC DRUGS WITHOUT IPP...
→ 2 /900 (D 275 and D 295)



WRAP DILATATION

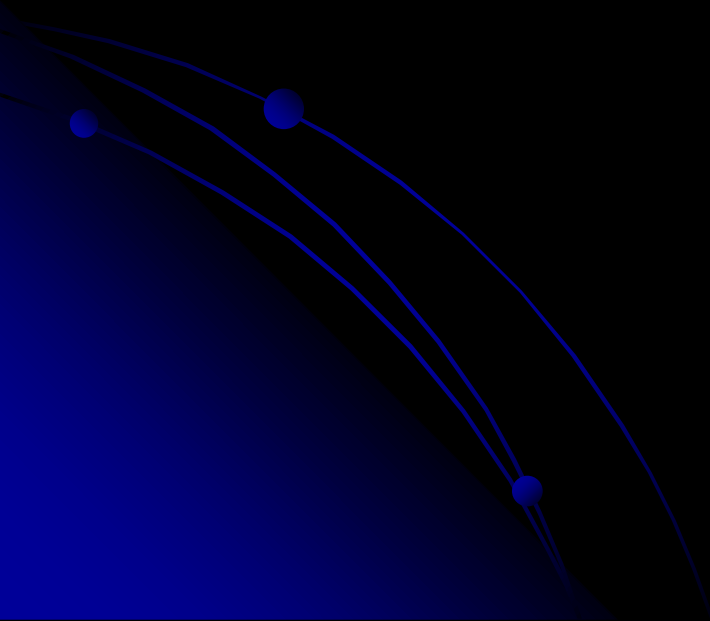
- TECHNICAL MISTAKE
 - To fix the wrap to the lower esophageal sphincter not GE junction!!!
 - To test with the bougie the food path
- Clinical warning signs: aphagia, pain.
- Evolution: wrap necrosis and perforation.
- Management:
 - Emergency: to redo or remove the wrap depending the gastric tissue quality

INTRATHORACIC WRAP MIGRATION

- CLINICAL WARNING SIGNS:
 - dysphagia, aphagia, pain
- Fréquence: 5/900 (Cohorte CHU Montpellier)
- Cause: Lachage suture pilier
- CAT: Réopération en urgence pour réintégration abdominale valve
- NB: si migration minime et bien tolérée possible surveillance

MORTALITY

- 1 CAS/900
- ATELECTASIA → HYPOXEMIA → WRAP
NECROSIS → PULMONARY EMBOLISM



**DONT FORGET:
MORBIDITY OF
SLEEVE AND GBP AFTER
LERANING CURVE**



JAMA | Original Investigation

Effect of Laparoscopic Sleeve Gastrectomy vs Laparoscopic Roux-en-Y Gastric Bypass on Weight Loss at 5 Years Among Patients With Morbid Obesity The SLEEVEPASS Randomized Clinical Trial

Paulina Salminen, MD, PhD; Mika Helmiö, MD; Jari Ovaska, MD, PhD; Anne Juuti, MD, PhD; Marja Leivonen, MD, PhD; Pipsa Peromaa-Haavisto, MD, PhD; Saija Hurme, MSc; Minna Soinio, MD, PhD; Pirjo Nuutila, MD, PhD; Mikael Victorzon, MD, PhD

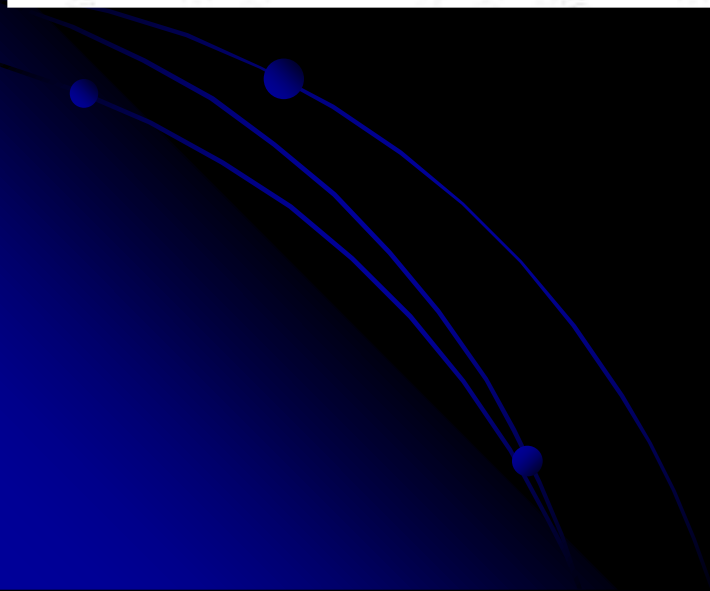


Table 5. Complications Reported for Laparoscopic Sleeve Gastrectomy and Laparoscopic Roux-en-Y Gastric Bypass

Complication Category and Type	Sleeve Gastrectomy (n = 121)	Gastric Bypass (n = 119)	P Value
Minor Early (<30 d) Complications, No. (%)			
Bleeding	3 (2.5)	2 (1.7)	
Intra-abdominal infection/infection of unknown origin	2 (1.7)	8 (6.8)	
Pneumonia	1 (0.8)	6 (5.1)	
Superficial wound infection	2 (1.7)	3 (2.6)	
Troacar site pain	1 (0.8)		
Dehydration		1 (0.9)	
Total	9 (7.4)	20 (17.1)	.02
Major Early (<30 d) Complications, No. (%)			
Bleeding	3 (2.5)	7 (6.0)	
Intra-abdominal infection/infection of unknown origin	1 (0.8)	3 (2.6)	
Pneumonia	1 (0.8)		
Bowel perforation	1 (0.8)		
Torsion of the enteroanastomosis		1 (0.9)	
Outlet obstruction	1 (0.8)		
Total	7 (5.8)	11 (9.4)	.29
Minor Late (>30 d) Complications, No. (%)			
Vomiting/dehydration		3 (2.5)	
Gastroesophageal reflux	11 (9.1)		
Ulcer/stricture at gastrojejunal anastomosis	2 (1.7)	6 (5.0)	
Dumping		3 (2.5)	
Nonspecific abdominal pain		1 (0.8)	
Total	13 (10.7)	13 (10.9)	.96
Major Late (>30 d) Complications, No. (%)			
Gastroesophageal reflux	7(5.8)		
Internal herniation		17 (14.3)	
Incisional hernia	3 (2.5)	1 (0.8)	
Total	10 (8.3)	18 (15.1)	.10

JAMA | **Original Investigation**

Effect of Laparoscopic Sleeve Gastrectomy vs Laparoscopic Roux-en-Y Gastric Bypass on Weight Loss in Patients With Morbid Obesity The SM-BOSS Randomized Clinical Trial

Ralph Peterli, MD; Bettina Karin Wölnerhanssen, MD; Thomas Peters, MD; Diana Vetter, MD; Dino Kröll, MD; Yves Borbély, MD; Bernd Schultes, MD; Christoph Beglinger, MD; Jürgen Drewe, MD, MSc; Marc Schiesser, MD; Philipp Nett, MD; Marco Bueter, MD, PhD

Table 5. Mortality and Adverse Events Requiring Reoperation or Endoscopic Intervention

Events	No. With Event/Total No. (%)		Absolute Difference (95% CI) ^a
	Sleeve Gastrectomy	Roux-en-Y Gastric Bypass	
Early morbidity (0-30 d)	1/107 (0.9)	5/110 (4.5)	-0.19 (-0.57 to 0.20)
Leak	0	1	
Infection	0	3	
Obstruction	1	1	
Death	0	1 ^b	
Late morbidity (1 mo-5 y)	15/101 (14.9)	18/104 (17.3)	-0.05 (-0.25 to 0.16)
Operative			
Conversion to Roux-en-Y gastric bypass due to gastroesophageal reflux	9	NA	
Small bowel obstruction	0	2	
Internal hernia	0	9	
Incisional hernia	1	1	
Gastroscopy necessary: laparoscopy	NA	1	
Severe dumping	0	3 ^c	
Insufficient weight loss	5 ^d	2	
Death	0	1 ^e	
Total reoperations or interventions	16/101 (15.8)	23/104 (22.1)	-0.10 (-0.29 to 0.09)
Total mortality	0	2/104 (1.9)	-0.50 (-0.82 to -0.18)

CONCLUSION

- Currently, Nissen-Sleeve Gastrectomy is safe and an efficient option if you respect the technical key points.
- Learning curve is difficult: NOT for bariatrics beginners
- Nissen Sleeve has to be evaluated in the long terms...

> [BMJ Open. 2022 Jun 10;12\(6\):e061499. doi: 10.1136/bmjopen-2022-061499.](#)

Nissen-Sleeve procedure versus laparoscopic Roux-en-Y gastric bypass in patients with morbid obesity and gastro-oesophageal reflux disease: protocol for a non-inferiority randomised trial (GINSBY)

Judith W H 't Hart ^{1 2}, Bo J Noordman ³, Laser U Biter ³, Ivonne Leeuwenburgh ⁴,
Martin Dunkelgrun ³, Jan A Apers ³

NISSEN SLEEVE WORKSHOPS



**DIRECTOR OF THE COURSE:
Pr D.NOCCA**

Head of the Bariatric team of University Montpellier Hospital. Director of the scientific committee of SOFFCOM. Founder President of ICYLS



Contact: david.nocca@sfr.fr

SAVE THE DATE

October 3rd and 4th 2024

AFTER NEW YORK, MIAMI, MONTREAL and LONDON,

MONTPELLIER

 France

Will host the

8th SLEEVE GASTRECTOMY CONSENSUS SUMMIT

HONORARY PRESIDENT
M. BASHIR (CANADA)



PRESIDENT PR. D. NOCCA
(CHU MONTPELLIER)



INFORMATIONS : dmachulska@agence-evea.com

