LSU Health NEW ORLEANS School of Medicine Department of Surgery

Robotic Take Down Of Nissen Fundoplication To RYGBP

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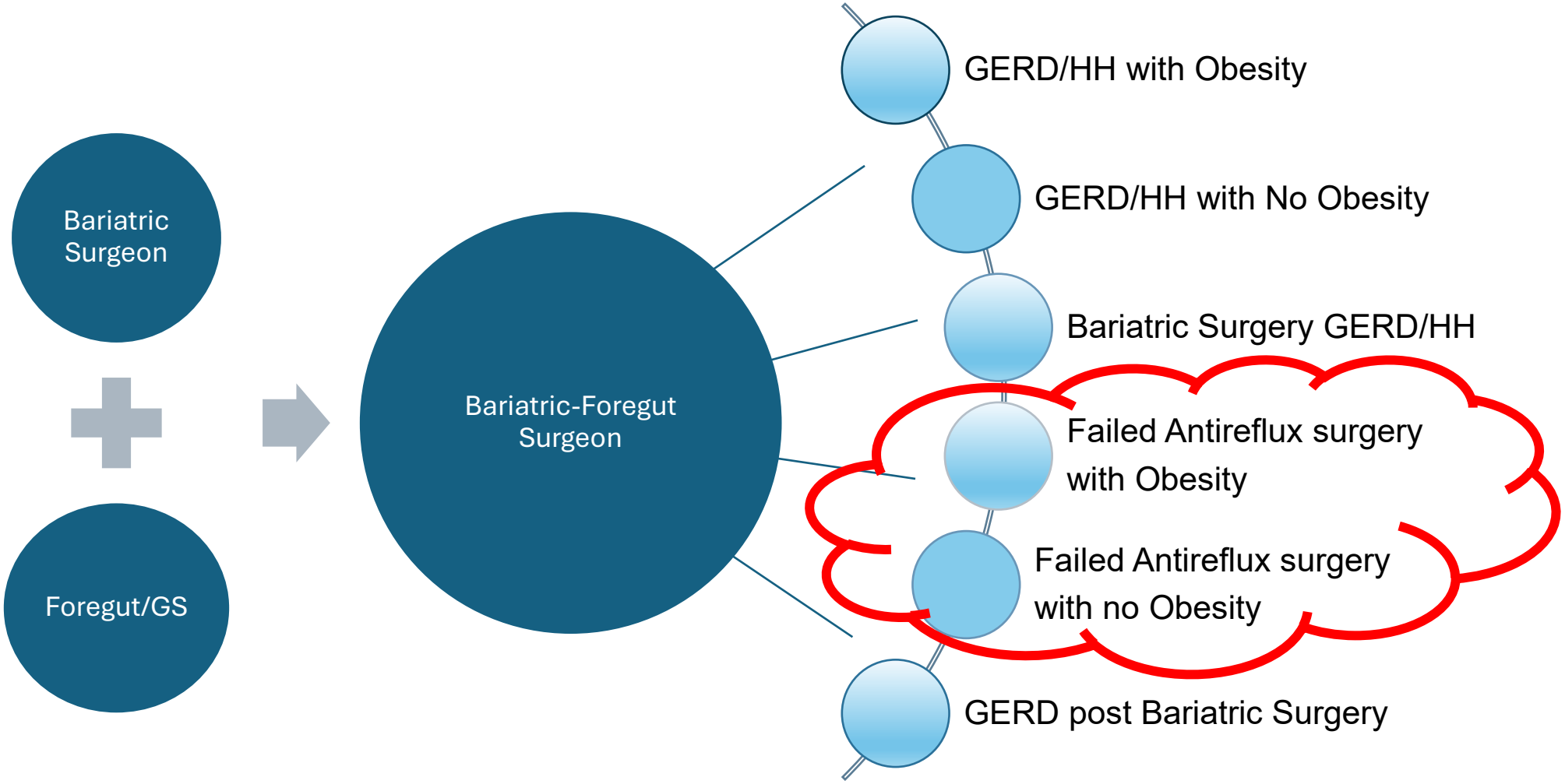
Financial Disclosures

- Intuitive Surgical – Speaker/Proctor
- WL GORE – Speaker

BARIATRIC-FOREGUT SURGERY



INDICATION FOR EVALUATION

If primary symptoms heartburn/regurgitation (42%)

- *Objective evidence of GERD required*
  - Abnormal pH study
  - Esophageal damage (esophagitis, Barrett's, strictures)
  - Hiatal hernia

Patients presenting with dysphagia (17%)

- *Rule out hiatal hernia, dysmotility, GERD complications, previous surgeries*

Heartburn/regurgitation + dysphagia (4%)

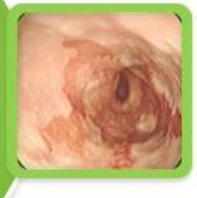
Patients presenting with hiatal hernia

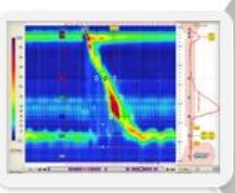
- *Symptomatic vs asymptomatic*

Furnee E et.al. J Gastrointest Surg (2009) 13:1539–1549

ESTABLISHING THE DIAGNOSIS

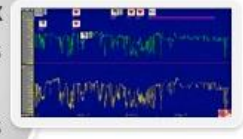
EGD
Evaluates mucosa for esophagitis, strictures, ulcerations, Barrett's esophagus (BE) and anatomical abnormalities.



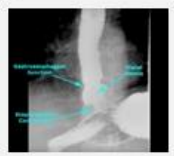


Manometry
Used to rule out achalasia or other contraindicated conditions and plan surgical approach.

pH testing
Documents pathologic acid reflux and correlates events with symptoms.[2] Important in patients with non-erosive GERD.



Barium Esophagram (UGI)
Evaluate global anatomy for structural problems.



1. Jobe BA, et. al.; J Am Coll Surg. 2013 Oct;217(4):586-97.
2. Required for all patients unless esophagitis LA Grade C, D, or BE ≥ 3cm.

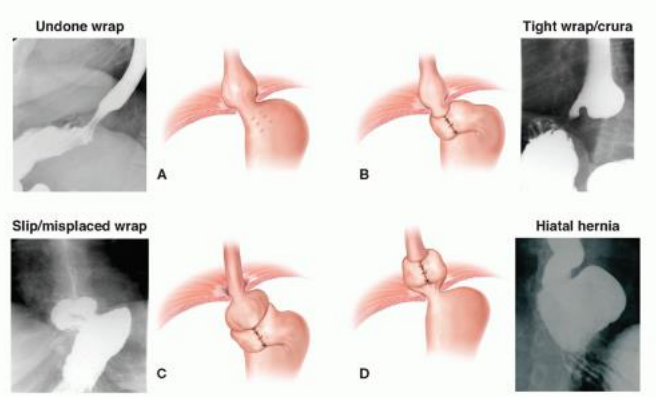
SYMPTOM CORRELATION WITH PATTERN OF FAILURE

Undone wrap

Heartburn
Chest pain
Regurgitation
Dysphagia
Nausea
Bloating
SOB
Aspiration

Slip/misplaced wrap

Heartburn
Chest pain
Regurgitation
Dysphagia
Nausea
Bloating
SOB
Aspiration



Tight wrap/crura

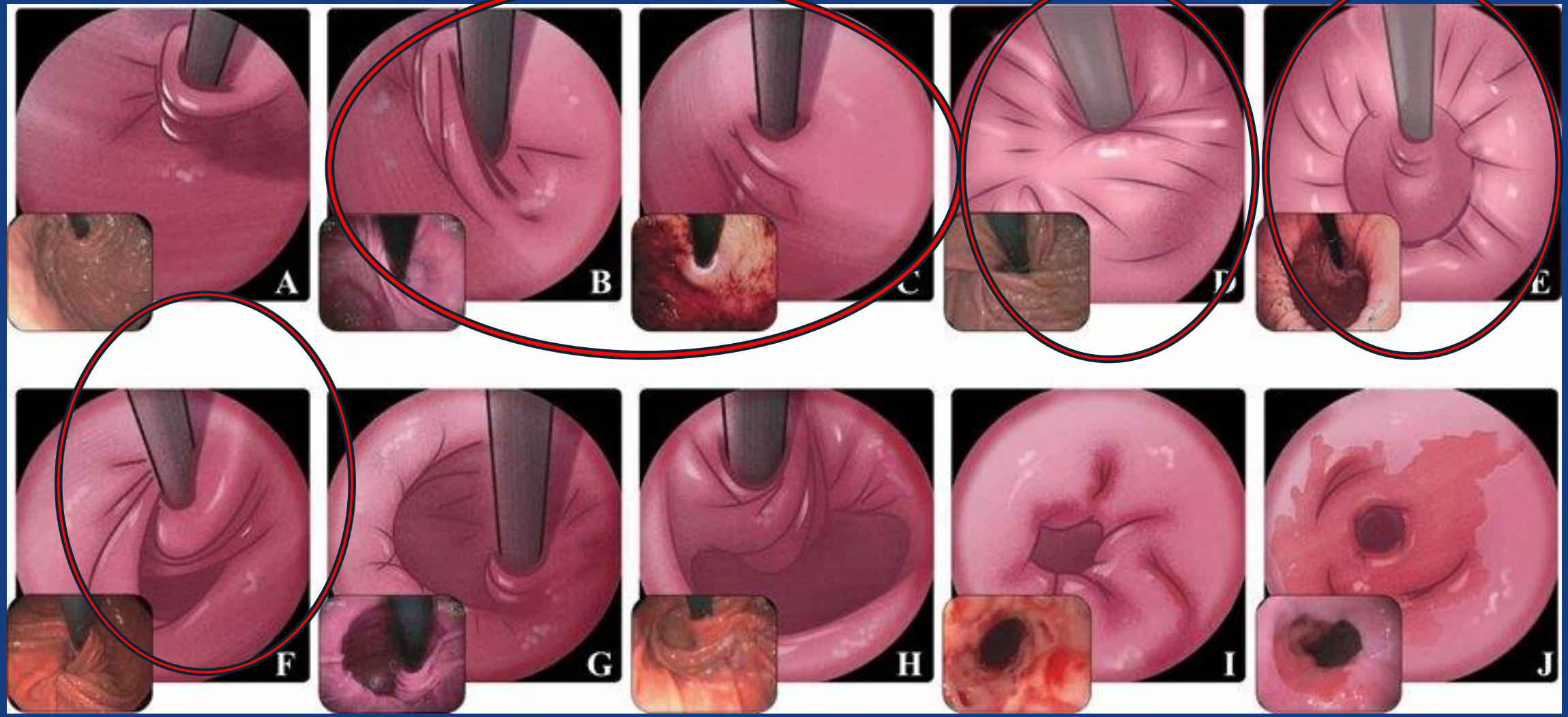
Heartburn
Chest pain
Regurgitation
Dysphagia
Nausea
Bloating
SOB
Aspiration

Hiatal hernia

Heartburn
Chest pain
Regurgitation
Dysphagia
Nausea
Bloating
SOB
Aspiration

Smith CD in Thoracic Key. https://thoracickey.com/redo-fundoplication/

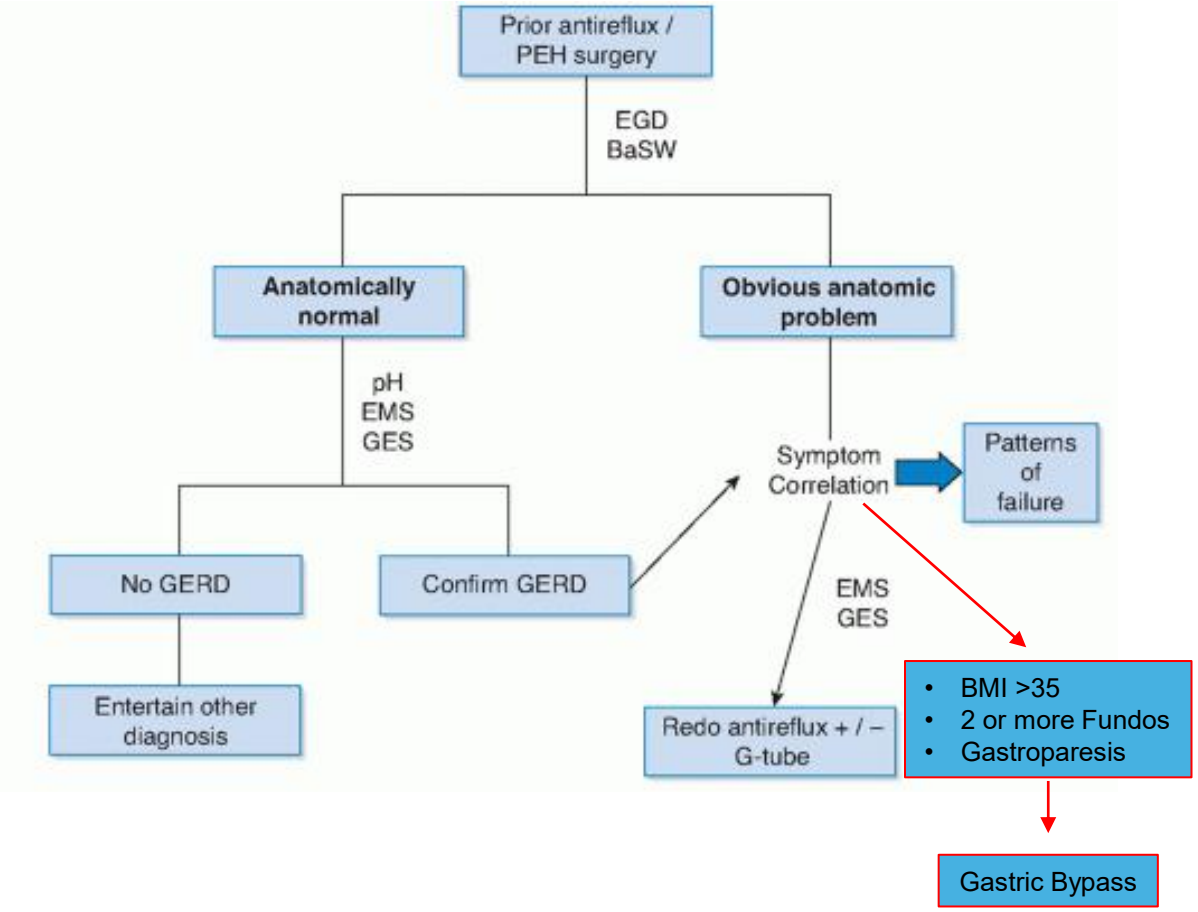
Endoscopic assessment of fundoplications



Latorre-Rodríguez, A.R., et.al. *Surg Endosc* **38**, 6839–6845 (2024).

INDICATIONS FOR REOPERATION

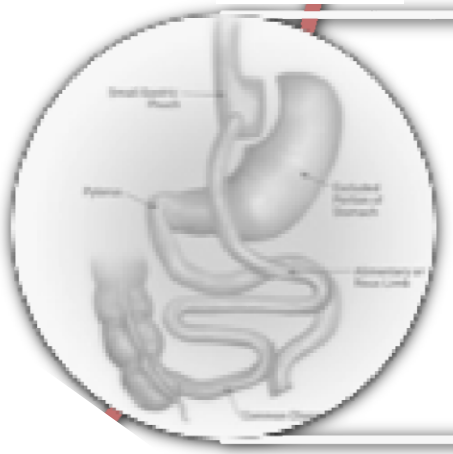
- Patients who have persistent, recurrent, or new foregut symptoms (heartburn, dysphagia, chest pain, regurgitation, asthma, hoarseness, chronic cough, or laryngitis)
- And
- Confirmed physiologic abnormalities (objective evidence of failure)
- Or
- Definable anatomic defect



Smith CD in Thoracic Key. https://thoracickey.com/redo-fundoplication/

Smith CD et.al. Ann Surg 2005;241(6):861-871

OPTIONS FOR REVISION

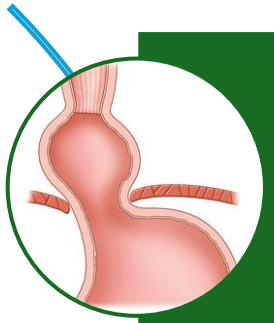


Conversion to Roux-en-Y (RNY) anatomy

- Two or more fundoplications
- Postsurgical gastroparesis
- Morbid obesity BMI >35
- Esophageal dysmotility or dilation
- Fundus not suitable for fundoplication

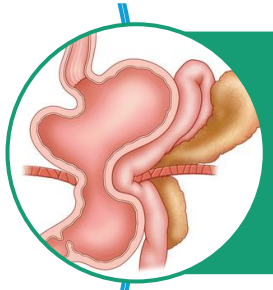
Based on preoperative workup and Health-related complications of obesity

PATIENT/CASE SELECTION



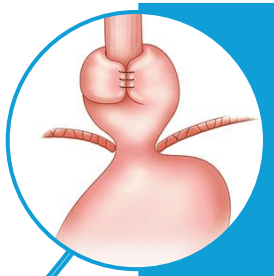
First cases

- Small HH defects
- GERD with no HH
- No Redo cases or large hernias (Type III, IV)



Advanced

- Larger hernias
- Concomitant cases (Bariatrics, General surgery, etc)



Advanced

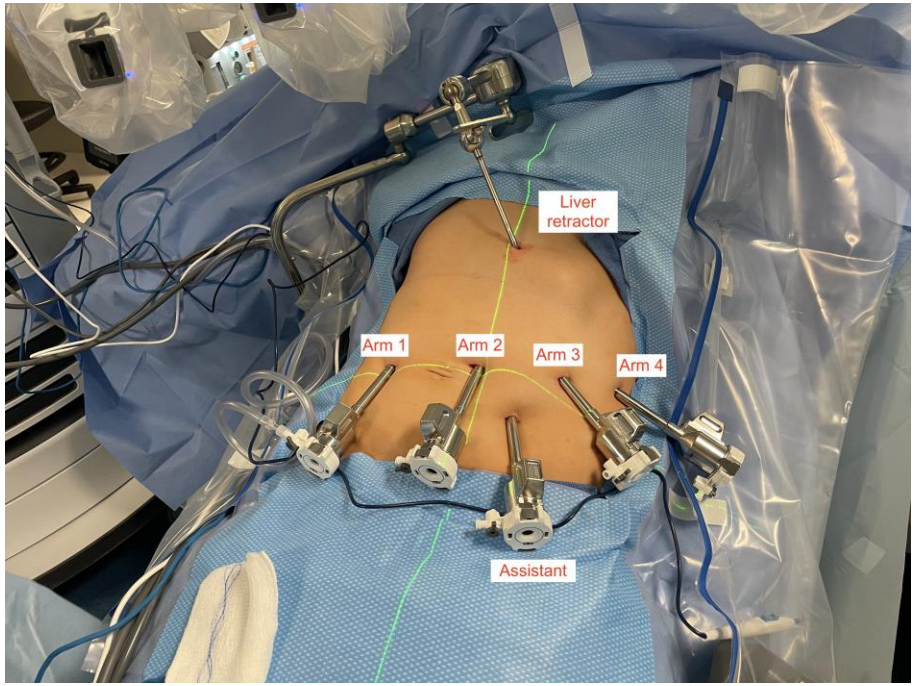
- Revisional cases

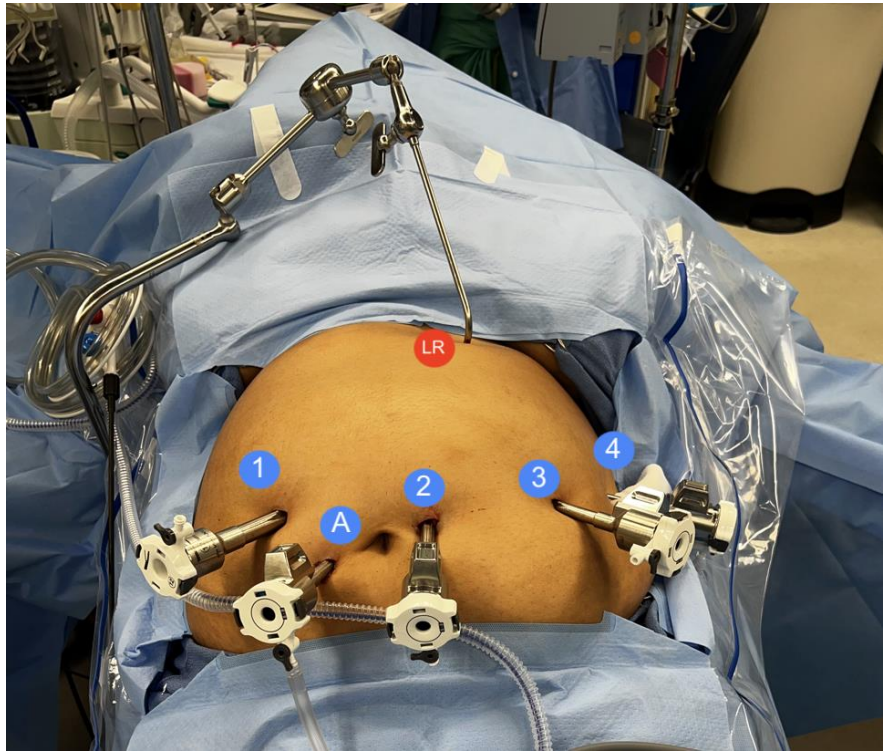
Technology learning

PORT PLACEMENT

1. Stapler Trocar – RUQ/Midclavicular
2. Camera Trocar – L Paramedian
3. Right Hand Trocar – LUQ/Midclavicular
4. Robot Assistant Trocar – L Anterior Axillary Line

A. Bedside Assistant





***Liver retractor blade according to the available space*

Operative technique

Clear the anterior stomach/fundoplication/ GE Junction

- Adhesiolysis between the stomach and the liver and around the hiatus
- Full mobilization of the fundoplication

Circumferential esophageal dissection to obtain adequate esophageal length

- Crural repair takedown if necessary

Complete takedown of the old repair is a mandatory step before considering any surgical option

- Fat pad should be routinely excised (Identify GEJ, determine esophageal length)

Assess the tissue quality of the crura

- Consider mesh reinforcement (absorbable) and/or crural relaxing incisions

Assess the fundus (consider fundectomy)

Challenging case

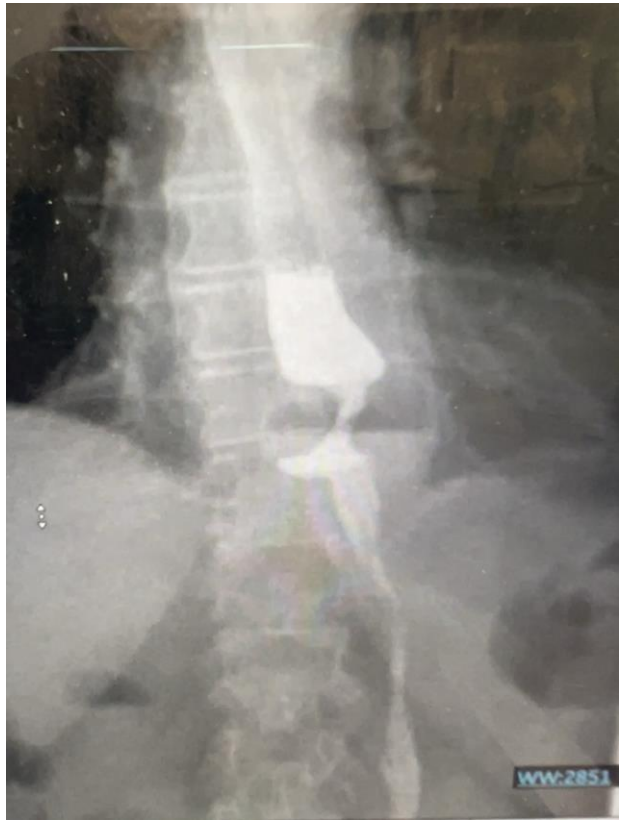
61 yo F referred recurrent HH s/p Paraesophageal hernia repair with mesh and Nissen fundoplication

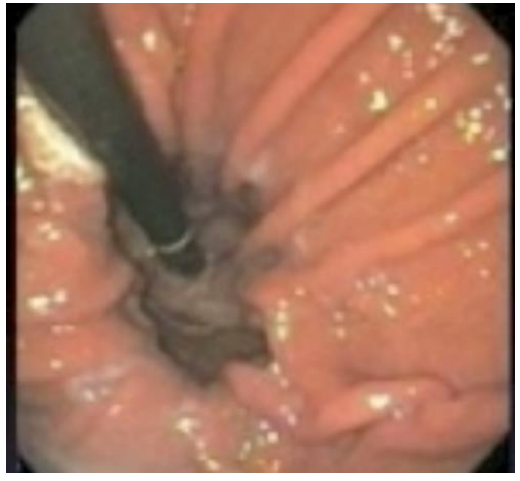
Symptoms: regurgitation and heartburn

BMI: 37.89kg/m^2

PMH: OSA, HTN, GERD, Obesity

PSH: Nissen fundoplication + PEHR w/ mesh (3/8/22)





REDO HHR + FUNDOPLICATION TAKEDOWN + CONVERSION TO RNY

ASMBS
ANNUAL MEETING
WASHINGTON D.C.
JUNE 15 - 19, 2025

Clear the anterior stomach/fundoplication/ GE Junction

- Adhesiolysis between the stomach and the liver and around the hiatus
- Full mobilization of the fundoplication

Circumferential esophageal dissection to obtain adequate esophageal length

- Crural repair takedown if necessary

Fundoplication takedown (mandatory step)

- Fat pad should be routinely excised (Identify GEJ, determine esophageal length)

Creation of gastric pouch

- Consider fundectomy

Assess the crura

- Consider mesh(absorbable) and/or crural relaxing incisions

CONCLUSIONS

- Revisional surgery after failed antireflux repairs requires careful preoperative and intraoperative assessment to identify identify the cause of the failure
- The choice of the surgical procedure should be tailored to the individual patient
- Gastric bypass is an excellent option that can be considered in patients with recurrent reflux symptoms after failed antireflux surgery
- The combination of these two procedures is technically demanding and requires appropriate training, expertise, and strict adherence to established surgical principles to overcome the challenge of redo antireflux surgery