HYBRID LAPAROSCOPIC FUNDOPLICATION–ENDOSCOPIC SLEEVE GASTROPLASTY (HF-ESG) (NOVEL TECHNIQUE USING SINGLE LUMEN GASTROSCOPE+LAPAROSCOPY)

Ahmed Jad MD

FRCSC, FACS,FASMBS, ABOM diplomate

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No disclosures

Learning Objectives

- Address the treatment gap in obesity + GERD
- Understand the rationale for TF-ESG in obesity
- Define patient selection and indications
- Review procedural steps and technical considerations
- Evaluate safety, feasibility, and program integration

The treatment gap in obesity + GERD

- Current evidence supports an **integrated obesity + reflux treatment**
- Roux-en-Y Gastric Bypass demonstrates the strongest anti-reflux efficacy among bariatric procedures
- Endoscopic Sleeve Gastroplasty may offer a lower GERD-risk alternative in selected patients compared with surgical sleeve gastrectomy

Katz PO, et al. *ACG Clinical Guideline: Diagnosis and Management of GERD.* Am J Gastroenterol. 2022.
Beran A, et al. *ESG vs Sleeve Gastrectomy Meta-analysis.* Obes Surg. 2022.
SAGES Guidelines for Comorbidities Relevant to Bariatric Surgery.

The rationale for TF-ESG in obesity

When RYGB May Not Be Ideal

- Crohn's Disease involving the small bowel
- High nutritional risk (frailty, severe micronutrient deficiency, poor supplement adherence)
- Chronic NSAID use or active nicotine/smoking exposure
- Need for future duodenal/ampullary access (e.g., ERCP, FAP surveillance, pancreaticobiliary disease)
- Patient preference

Parrott J, et al. ASMBS Integrated Health Nutritional Guidelines for the Surgical Weight Loss Patient 2016 Update: Micronutri ents. Surg Obes Relat Dis. 2017.

Liang Y, et al. *Nonsurgical risk factors for marginal ulcer following Roux-en-Y gastric bypass: a systematic review and meta-analysis.* 2024.

Aelfers S, et al. *Inflammatory Bowel Disease Is Not a Contraindication for Bariatric Surgery.* Obes Surg. 2018.

Patient Selection and Indications

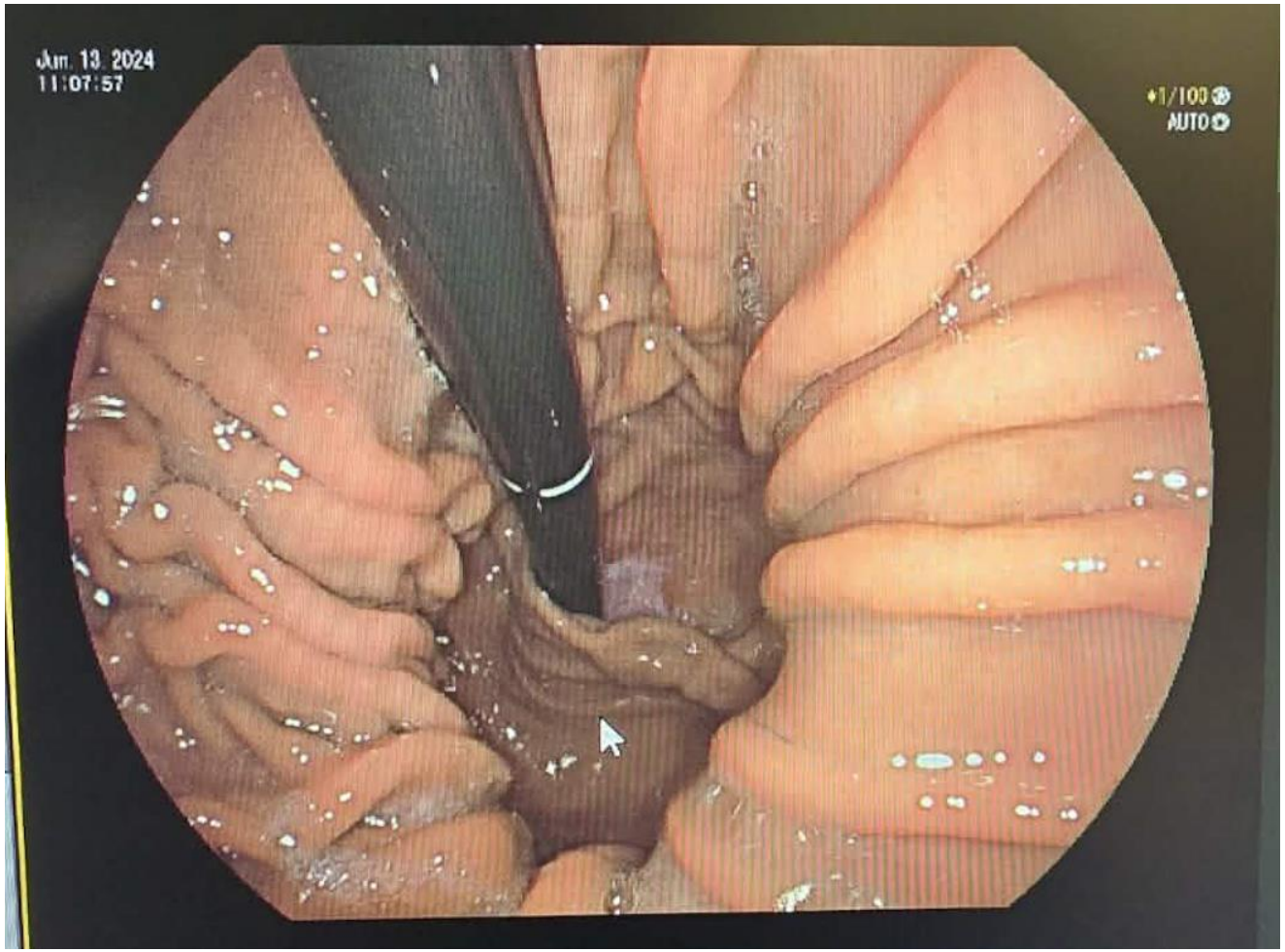
58 F presenting with:

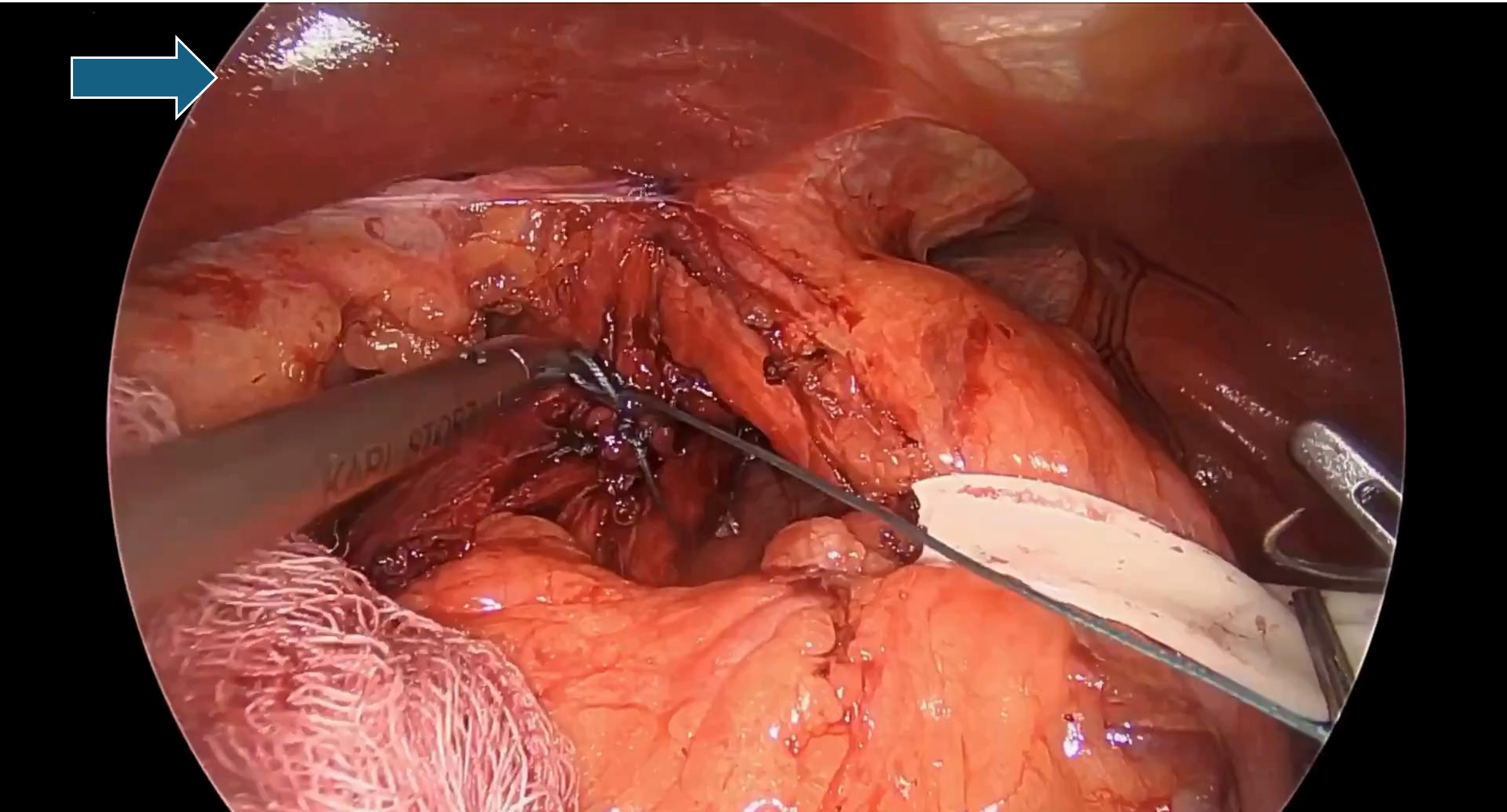
- GERD for 24 years
- Refractory to medical treatment with proton pump inhibitors twice daily
- Hiatal hernia
- Obesity class 2 (BMI 38)
- Known Crohn's disease on biologic (adalimumab)
- Obstructive sleep apnea

Procedural steps and technical considerations

- Begin with hiatal hernia repair and Toupet fundoplication to restore normal gastroesophageal anatomy
- **ESG** OverStitch platform/Single-channel therapeutic scope/NXT system
- 1 I configuration + 4 Us configurations
- Simultaneous laparoscopic visualization supports procedural guidance and safety

Preoperative endoscopy





Postoperative outcome

1. GERD Outcomes

Discontinuation of PPIs

Resolution of regurgitation and heartburn

2. Weight Loss Outcomes

% Total Body Weight Loss

3 months 11%

6 months 13%

9 months 16%

12 Months 17%

3. Metabolic Outcomes

Resolution of obstructive sleep apnea

Conclusions

- **Hybrid hiatal hernia repair, fundoplication, and endoscopic sleeve gastroplasty (HF-ESG)** is a novel strategy designed to address **both GERD and obesity in a single procedure**
- Early experience demonstrates that this approach is **technically feasible and may provide effective reflux control while achieving meaningful weight loss**
- TF-ESG allows possible **step 2** surgery (SADI/DS/MAGDI)
- Given the **very limited existing literature**, this technique represents an **emerging therapeutic option for carefully selected patients who are not ideal candidates for conventional bariatric surgery**
- **Further prospective studies with larger cohorts and longer follow-up are required** to confirm durability, and long-term metabolic and reflux outcomes.

Thank you

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