Conversion of a Failed Endoscopic Sleeve Gastroplasty to Laparoscopic Sleeve Gastrectomy

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INTRODUCTION

Close to half of Americans will be struggling with obesity and its related comorbidities by 2023.[1] Currently, bariatric surgery is the most effective weight loss treatment, with laparoscopic sleeve gastrectomy (LSG) constituting around 60% of all bariatric procedures performed.[2] Endoscopic sleeve gastroplasty (ESG) was introduced in 2012 as an endoscopic, less invasive bariatric intervention.[3,4] In the past decade, a few studies have shown that while there is still room for improvement, ESG is a safe endoscopic bariatric option for patients with class I and II obesity.[5]

CASE STUDY

A 37-year-old female presented with weight gain and post prandial abdominal pain 2 years after ESG at an outside institution. The procedure involved the Apollo Overstitch device, performing a total of 5 U-stitch permanent sutures. Her BMI prior to ESG was 53 and she lost 35 lbs (BMI 47.6). after her procedure, which she regained within a year. CT and EGD showed a complete dehiscence of ESG. Laparoscopic findings noted adhesions within the lesser sac. There was a single full thickness suture tethering the stomach to the abdominal wall. A Laparoscopic gastric exploration was performed to take down the ESG sutures, followed by performing LSG. The patient was discharged on POD2. During her 6th month follow up visit, her BMI was 42, TBWL% was 14.8, and EWL% was 26.19.

FIGURES

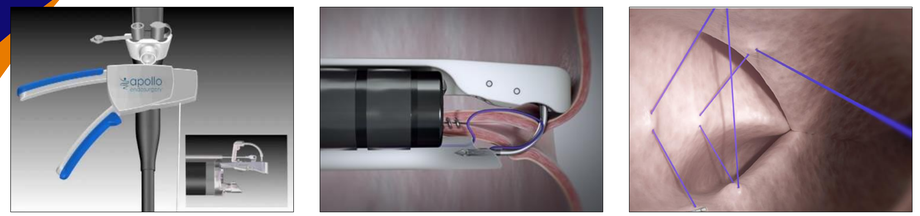


Figure 1. Adapted from Apollo Endosurgery Inc.[6]

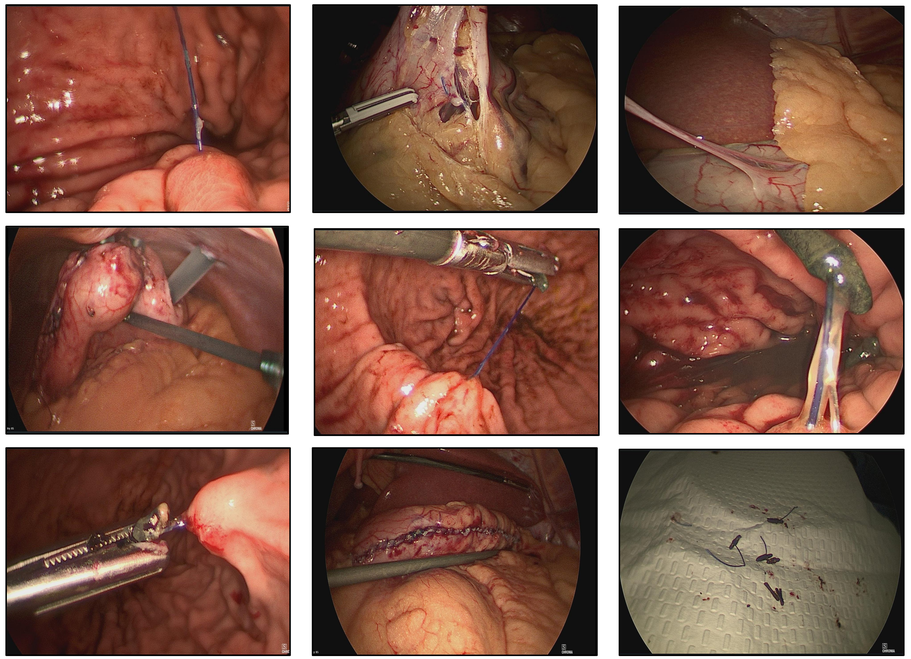


Figure 2. Laparoscopic and Endoscopic views of ESG take down and conversion to sleeve gastrectomy

DISCUSSION

- Incisionless bariatric procedures are in demand due to patients' fear of surgery.[5]
- Early partial endoluminal stitch devices made endoluminal vertical gastroplasty, or Transoral Outlet Reduction possible.[7-9]
- Apollo OverStitch, invented in 2012, is currently utilized for ESG
- Fundal pouch sparing plays a significant role ESG weight loss mechanism (Promotes delayed gastric emptying).[10,11]
- MERIT trial (2022) showed efficacy of ESG in class 1 and class 2 obesity.[5]
- Further studies are required to evaluate whether full thickness suturing causes adhesions/tethering of the stomach to the abdominal wall, which could potentially put stress on the gastroplasty resulting in dehiscence

CONCLUSION

- ESG should be utilized as a part of a structured, multidisciplinary bariatric program with appropriate long-term patient follow up
- Follow up EGD to evaluate for retightening of ESG may be indicated
- EGS best results are seen in Class I and Class II obesity

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