Minimally Invasive Management of Epiphrenic Diverticula:
Case Series and Considerations for Postoperative Gastroparesis

School of Medicine
University of Missouri

Nicole Hatala, MD; Maddie Brune, MD; Caleb Hood, MD; Molly Gunter, MS4; Emily Hartlage, MD; Joshua Landreneau, MD; Thaqi Milot, MD

University of Missouri, Department of Surgery, Columbia, MO

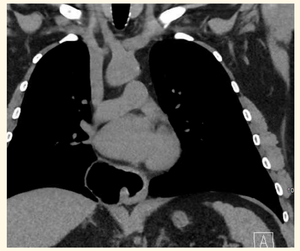
INTRODUCTION

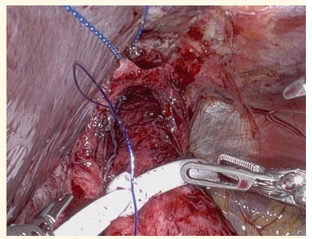
- Epiphrenic Diverticula: rare pulsion-type diverticula in the distal esophagus, associated with motility disorders (achalasia, diffuse esophageal spasm)
- Standard management: diverticulectomy with myotomy and anti-reflux procedure
- We present two cases of minimally invasive diverticulectomy with differing postoperative outcomes, highlighting the importance of evaluating gastric emptying in select patients

RESULTS

Case 1: Complicated

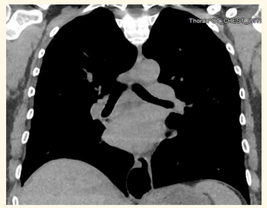
- 51F, prior Nissen with multiple revisions
- Dysphagia, reflux, weight loss
- Robotic PEH repair: Nissen takedown, diverticulectomy, gastropexy, PEG
- Developed severe gastroparesis, 42% retention at 4 hours
- Managed with G-POEM

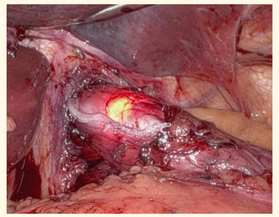




Case 2: Uncomplicated

- 36M, no prior foregut surgery
- Progressive dysphagia, 6 cm diverticulum
- Laparoscopic Heller myotomy with Dor fundoplication and diverticulectomy
- Uneventful recovery, complete resolution





KEY CONSIDERATIONS

Gastroparesis Risk

- More common with prior foregut surgery
- Particularly in patients with vagal nerve injury

Adjuncts to Facilitate Gastric Drainage

- Pyloroplasty or endoscopic pyloromyotomy may facilitate gastric emptying
- Traditionally for refractory gastroparesis; prophylactic use after complex foregut operations is increasingly recognized

Preoperative Planning

- Gastric emptying evaluation may be useful in patients with extensive surgical histories and may influence operative planning

CONCLUSION

- Minimally invasive diverticulectomy remain viable options for symptomatic epiphrenic diverticula in selective patients
- Preoperative assessment of gastric emptying should be considered, particularly in patients with prior foregut surgery
- In cases of postoperative gastroparesis, pyloroplasty or endoscopic pyloromyotomy represent valuable adjuncts to optimize outcomes
- Further research is needed to better define indications and long-term results

REFERENCES

1. Bennett B, et al. Epiphrenic Diverticula. StatPearls. 2025.
2. Soares R, et al. Epiphrenic Diverticulum of the Esophagus. J Gastrointest Surg. 2010;14(12):2009–2015.
3. Versha F, et al. Abnormal Gastric Emptying After Nissen Fundoplication. Am J Gastroenterol. 2017;112:S670.
4. Kataria R, et al. Post-Fundoplication Dumping Syndrome. ACG Case Rep J. 2018;5:e1.