

Rebecca M. Haug, M.D.,¹ Mark Radlinski, M.D.,¹ Yang Lei, M.D.,² Ross C.D. Buerlein, M.D.¹

1. Division of Gastroenterology and Hepatology, Department of Medicine, University of Virginia, Charlottesville, VA, USA
2. Division of Gastroenterology and Hepatology, Department of Medicine, University of Calgary, Calgary, Alberta, Canada

INTRODUCTION

- Percutaneous endoscopic gastrostomy (PEG) tubes are commonly placed to provide nutritional support for patients who are unable to tolerate oral intake.
- Typically, PEG tubes are not removed until a mature track has formed in order to decrease the risk of spillage of gastric contents into the peritoneum.
- We present a case of a patient requiring removal of a newly placed gastrostomy tube. Closure of the gastrostomy site with over-the-scope-clip was not feasible due to esophageal stenosis refractory to dilation, so we performed endoscopic closure using a through-the-scope tack and suture device.

CASE BACKGROUND

- A 56-year-old woman with history of glottic stenosis and tracheostomy presented to the hospital for planned upcoming additional otolaryngological surgeries for her recurrent glottic stenosis.
- Gastroenterology was consulted for placement of percutaneous gastrostomy tube prior to her scheduled surgery. The patient experienced significant post-procedural pain and elected for PEG removal two days after placement.
- The risks and benefits of removing a freshly placed gastrostomy tube were discussed with the patient, and she elected to proceed with removal.

CASE IMAGES

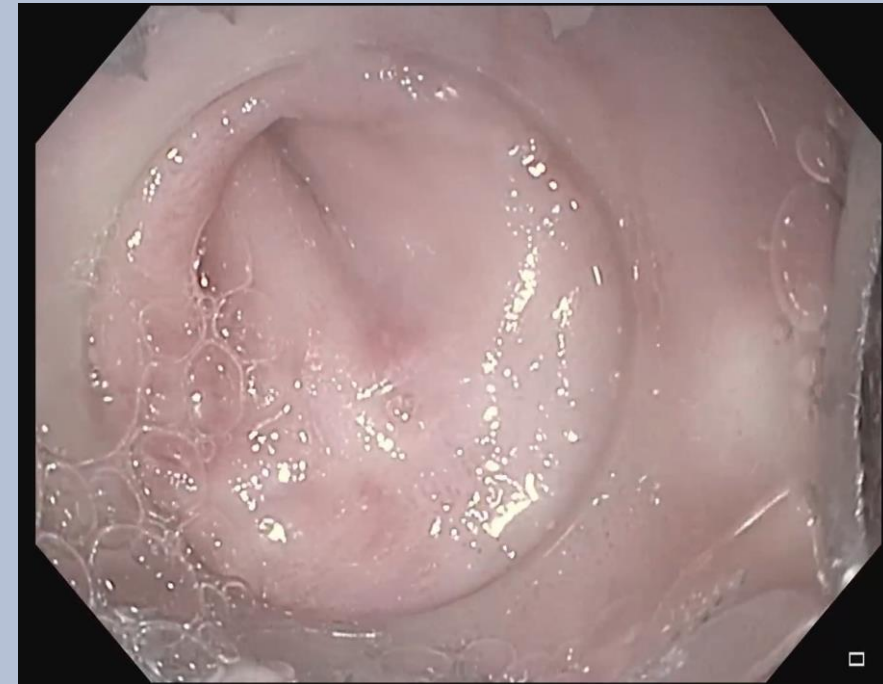


Figure 1: OTSC clip unable to traverse distal esophageal stricture

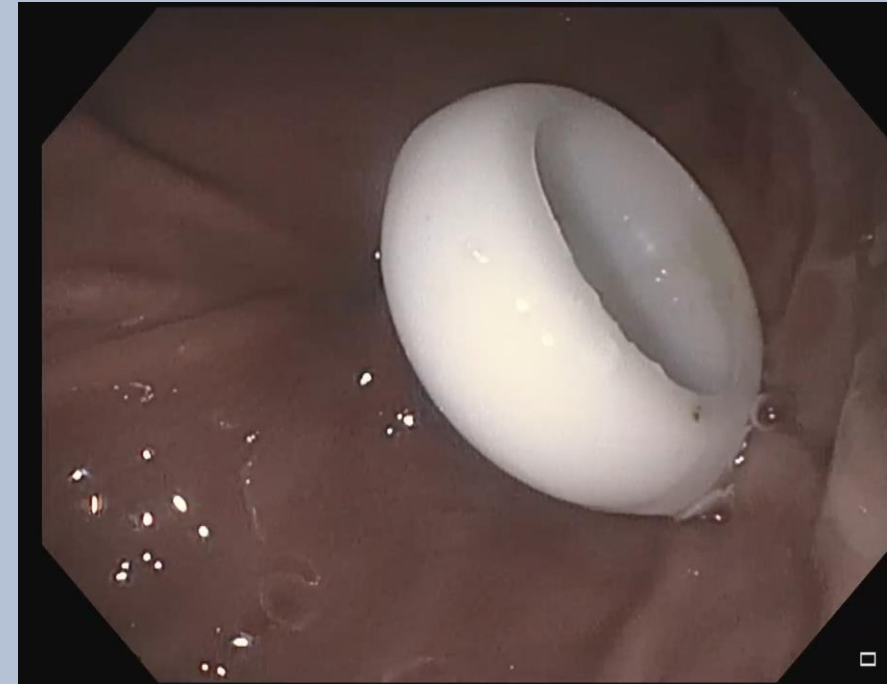


Figure 2: PEG tube noted in the stomach wall



Figure 3: Tacks being placed with gastrostomy tube still in place

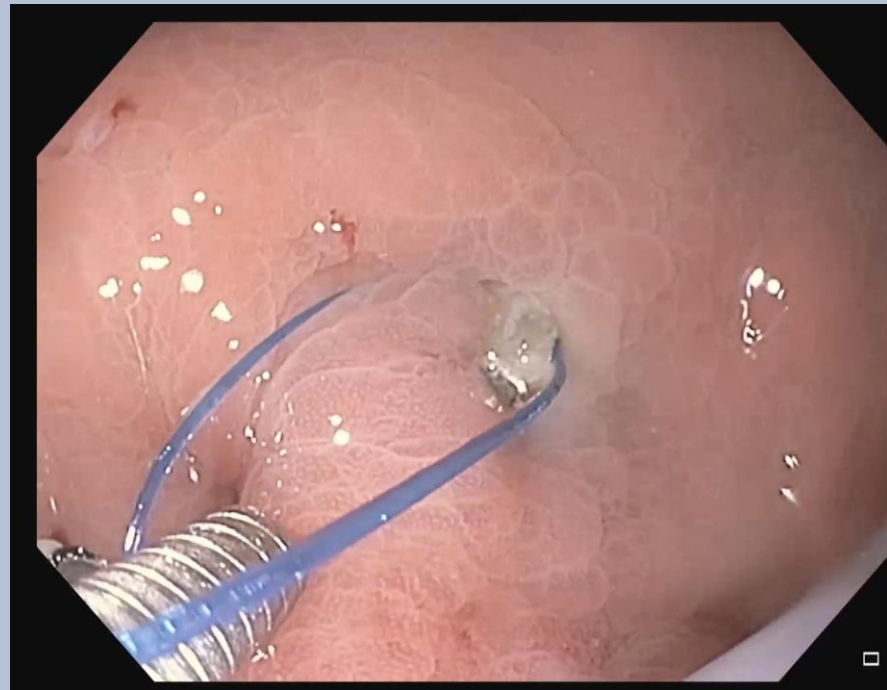


Figure 4: Tacks being placed with gastrostomy tube still in place

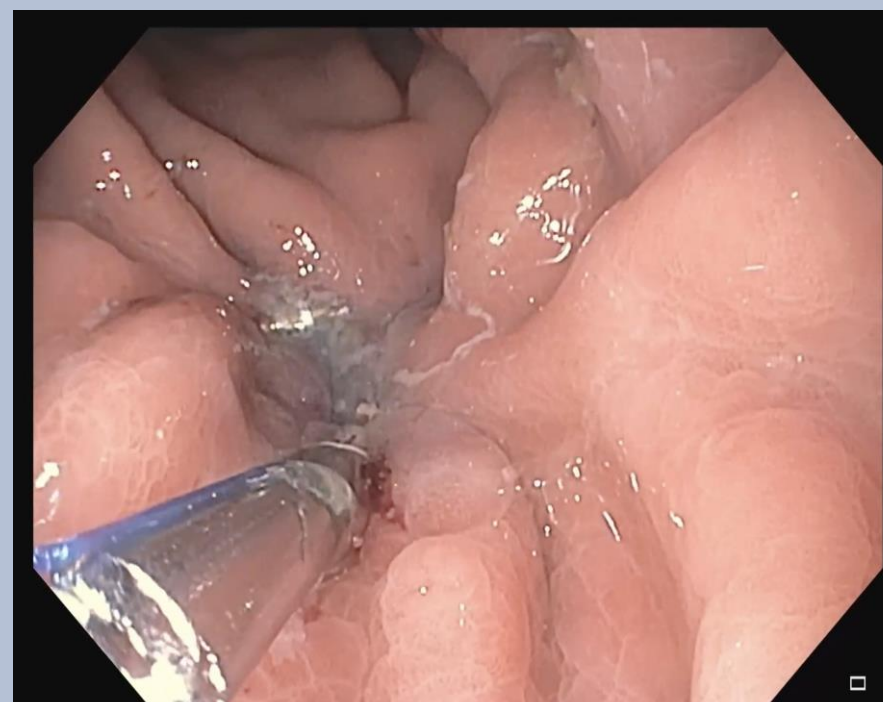


Figure 5: Fourth tack being placed as stomach deflates after PEG removal



Figure 6: Successful endoscopic closure

CASE DESCRIPTION

- The original plan was to attempt closure of the defect with an over-the-scope (OTSC) clip (outer diameter 16.5 mm).
- Due to an intrinsic moderate stenosis found at 35 to 37 cm, the endoscope would not pass with the OTSC attached (Figure 1). Instead, the decision was made to close the gastrostomy tube site with a through-the-scope tack and suture device. Four tacks were deployed in a figure four pattern (Figures 3 and 4).
- Three of the four tacks were placed with the gastrostomy tube still in-situ to facilitate continued insufflation and visualization. The gastrostomy tube was then cut from the outside of the patient, and the severed end was pushed into the stomach (removed at end of procedure). The fourth tack was placed as the stomach deflated (Figure 5), and the cinch was deployed (Figure 6). This technique provided adequate long-term closure.

DISCUSSION

- Over-the-scope clips (OTSC) are effective in closure of gastrostomy tube defects, but the large outer diameter of the device can be prohibitive in the setting of strictures.
- This case demonstrates the efficacy of endoscopic suturing using a tack and suture device in the setting of esophageal stenosis that prohibited over-the-scope clip placement.
- Additionally, partial closure was performed around an indwelling gastrostomy tube to allow adequate insufflation in a fresh gastrostomy site.