VIDEO CASE REPORT

EUS-guided gastroenterostomy assisted by extrinsic abdominal compression to treat gastric obstruction after surgical resection of a GI stromal tumor

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INTRODUCTION

EUS-guided gastroenterostomy is increasingly used to treat gastric outlet obstruction after surgery such as a Whipple procedure.[1] Postoperative stenosis of the gastric lumen is a described adverse event after laparoscopic wedge resection of submucosal tumors located on the lesser curvature.[2,3] We describe a case of EUS-guided gastroenterostomy facilitated by extrinsic abdominal compression to treat gastric obstruction resulting from a laparoscopic wedge resection of a gastrointestinal stromal tumor.

DESCRIPTION OF THE CASE

A 77-year-old woman presented with upper abdominal pain. An abdominal CT showed a 6-cm mass arising from the lesser curvature. EUS with fine-needle biopsy confirmed the diagnosis of a gastrointestinal stromal tumor. She underwent robotically assisted laparoscopic

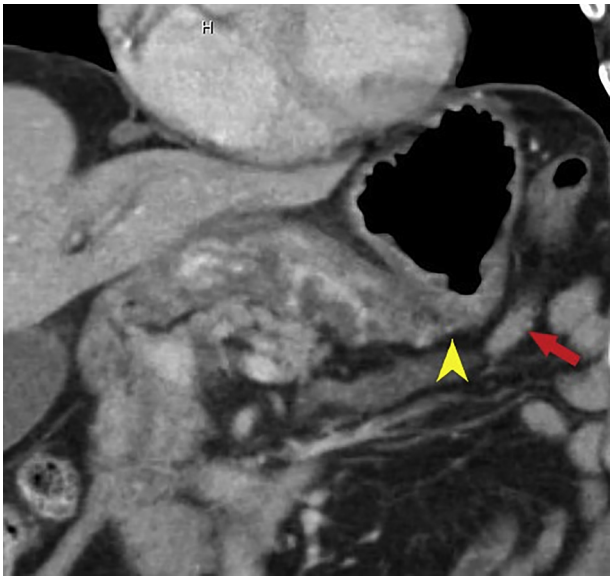

Figure 1. Abdominal CT showing gastric angulation/narrowing (*yellow arrowhead*) and the target jejunal loop (*red arrow*).

Figure 2. Endoscopic image showing gastric narrowing at the proximal body of the stomach (*arrow*).

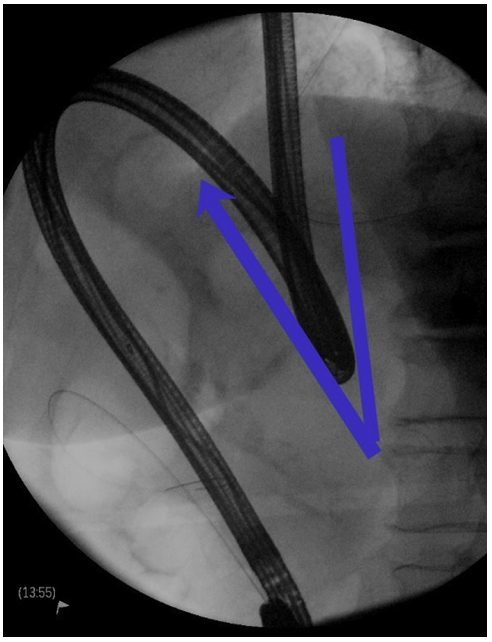

Figure 3. Fluoroscopic image demonstrating gastric angulation (*blue line*).

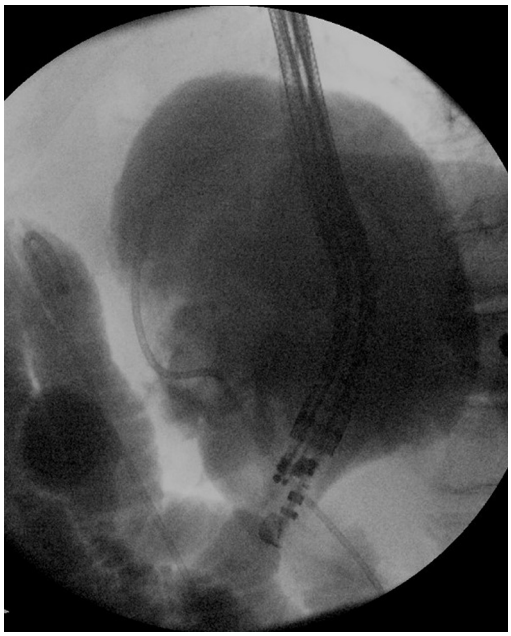

Figure 4. Fluoroscopic image of the jejunal loop opposing the stomach.

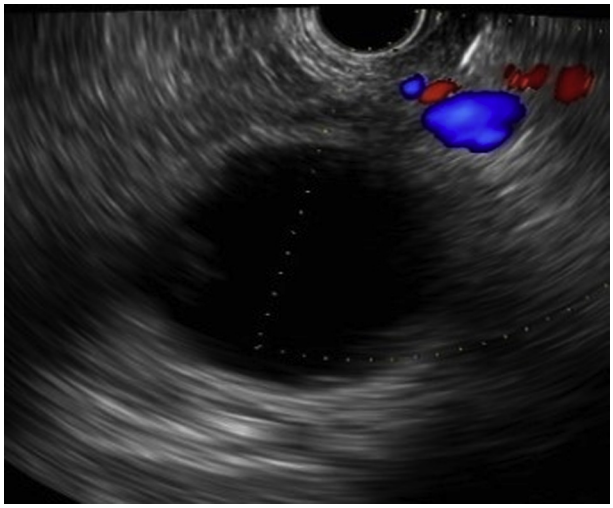

Figure 5. EUS image of the jejunal loop opposing the stomach with intervening blood vessels.

resection 2 weeks later. She was seen with a 1-week history of vomiting, weight loss, and inability to tolerate diet. An abdominal CT was remarkable for angulation/narrowing at the proximal gastric body resulting in outlet obstruction without other findings (Fig. 1).

PROCEDURE

Upper endoscopy revealed severe angulation and luminal stenosis starting at the proximal gastric body (Fig. 2). The gastroscope was able to reach the duodenum with difficulty (Fig. 3). A nasocystic drain was advanced to the proximal jejunum. The gastroscope was removed, and EUS was advanced to the stomach. The drain was infused with diluted contrast to highlight and distend the target jejunal loop for better apposition with the gastric wall. The stomach (proximal to the stenosis) was opposed to the jejunum in only one spot (Figs. 1 and 4). Unfortunately, there was a major intervening blood vessel (Fig. 5).

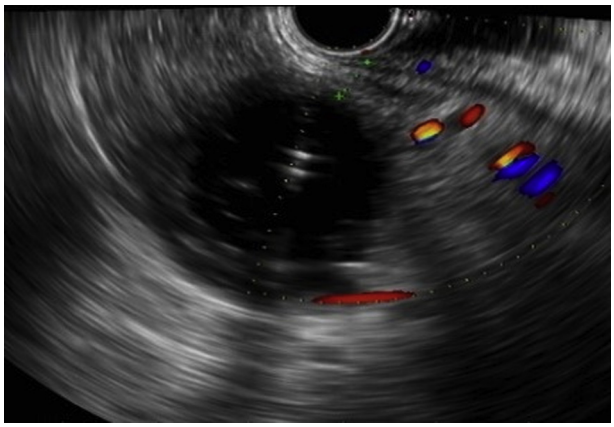

Figure 6. EUS image of the jejunal loop opposing the stomach after application of extrinsic abdominal compression.

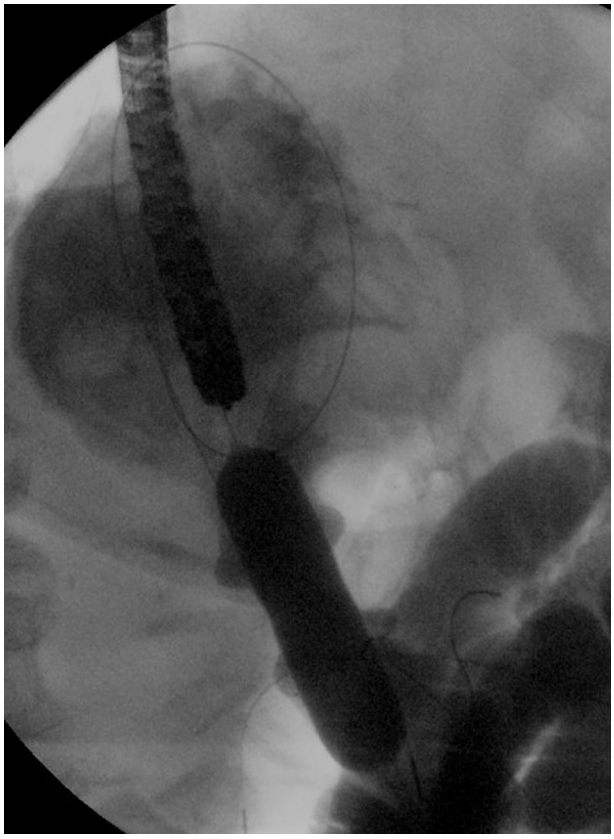

Figure 7. Controlled radial expansion balloon dilation of the gastroenterostomy.

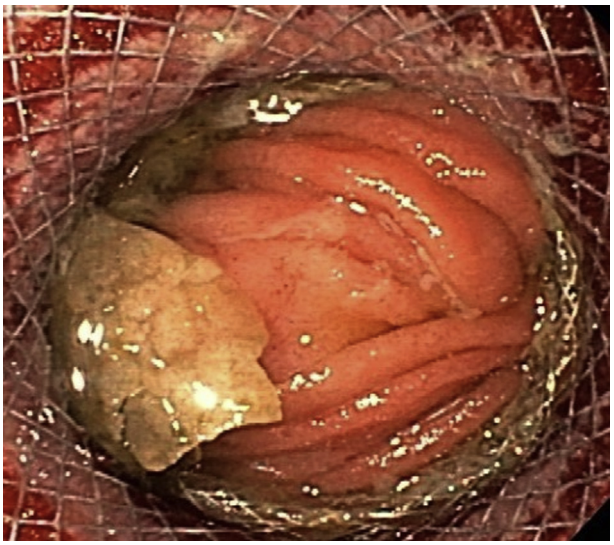

Figure 8. Endoscopic image of the gastroenterostomy after stent dilation.

Figure 9. CT image of the gastroenterostomy.

After applying extrinsic abdominal compression in the supine position, we were able to find a gastrojejunostomy spot on the side of the blood vessel (Fig. 6). A 2-cm lumen-apposing metal stent was then safely deployed. The stent was dilated to 2 cm (Figs. 7 and 8).

OUTCOME

Postoperative CT revealed successful gastroenterostomy without adverse events (Fig. 9). The patient's diet was advanced, and the patient was discharged home.

CONCLUSIONS

EUS guided gastroenterostomy can be used to treat postoperative gastric obstruction if a target jejunal loop opposing the stomach proximal to the obstruction is identified. Extrinsic abdominal compression can facilitate avoiding major blood vessels during gastroenterostomy in situations where there is no room to find an alternative jejunal target owing to anatomy (Video 1, available online at www.giejournal.org).

DISCLOSURE

All authors disclosed no financial relationships.

REFERENCES

1. Lajin M, Catalano MF, Khan NM, et al. Endoscopic ultrasound-guided gastrojejunostomy using a 2-cm lumen-apposing metal stent to treat benign afferent loop syndrome. Endoscopy 2019;51:695-6.
2. Lee CM, Park S. Laparoscopic techniques and strategies for gastrointestinal GISTs. J Vis Surg 2017;3:62.
3. Hwang SH, Park DJ, Kim YH, et al. Laparoscopic surgery for submucosal tumors located at the esophagogastric junction and the prepylorus. Surg Endosc 2009;23:1980-7.

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