

EUS-guided gastrojejunostomy for relief of gastric outlet obstruction from a large duodenal hematoma



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A 44-year-old man with a history of alcoholic pancreatitis presented with 6 weeks of nausea, vomiting, and inability to tolerate oral intake. He reported a preceding fall while intoxicated, resulting in a blunt-force injury to the abdomen. CT

demonstrated a pancreatic pseudocyst and large hematoma compressing the second and third portions of the duodenum with gastric outlet obstruction (GOO) (Fig. 1). Surgical consultation suggested that he was not an



Figure 1. CT view demonstrating a large duodenal hematoma with extrinsic compression of the second, third, and fourth portions of the duodenum.

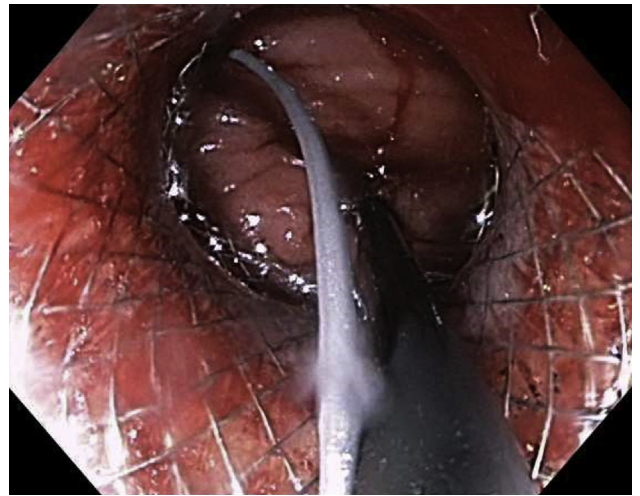


Figure 3. Endoscopic view across the lumen-apposing metal stent showing the anastomotic connection between the stomach and jejunum, effectively bypassing the obstruction.



Figure 2. Endoscopic view showing extrinsic compression of the second portion of the duodenum.



Figure 4. CT view 5 months after EUS-guided gastrojejunostomy demonstrating resolution of the duodenal hematoma and gastric outlet obstruction.

operative candidate, and total parenteral nutrition (TPN) was initiated. He was transferred for endoscopic evaluation and intervention.

Upper-endoscopic examination demonstrated severe extrinsic compression of the duodenum (Fig. 2). The decision was made to create an EUS-guided gastroenterostomy for relief of GOO (Video 1, available online at www.VideoGIE.org). A 0.025-inch × 450-cm angled VisiGlide wire (Olympus America, Center Valley, Pa, USA) was passed into the jejunum, and a 7F orojejunal tube was advanced over the wire. Contrast material mixed with saline solution and methylene blue was infused through the orogastric tube to distend the jejunum for localization by fluoroscopy and EUS. Once an appropriate position in the stomach was identified, the common wall between the stomach and jejunum was investigated with color Doppler imaging to identify interposing vessels. The stomach wall and the jejunum were punctured under endosonographic guidance by use of a 15-mm × 10-mm lumen-apposing metal stent (LAMS) and an electrocautery device. The stent was advanced into the jejunum and deployed under EUS and endoscopic guidance (Fig. 3).

After the procedure, TPN was discontinued, and the patient was advanced to a regular diet. He was discharged home 3 days after the procedure. Follow-up CT 5 months later demonstrated resolution of the hematoma (Fig. 4). Upper endoscopy was performed, and the LAMS was removed. Over the ensuing 3 years since LAMS removal, the patient has been admitted several times for adverse events related to alcoholism, but he has not had GOO recurrence.

Pancreatic and duodenal injuries occur in 3% to 5% of all traumatic abdominal injuries, and grade II duodenal injuries are marked by hematoma involving more than 1 portion of the duodenum.¹ Operative management consists of surgical evacuation of the hematoma and seromuscular repair when indicated.² Nonoperative management has historically consisted of postpyloric feeding tube placement while resorption of the hematoma is awaited, which in some cases may take weeks to months.

We present the first reported use of an EUS-guided gastrojejunostomy for the treatment of GOO from a large duodenal hematoma. This procedure may be used as an alternative to surgical or radiologic management and allows restoration of enteral access to avoid prolonged postpyloric feeding. When performed by a skilled therapeutic endoscopist with experience in EUS-guided enteral anastomosis creation for other indications, it is safe and efficacious for managing this challenging condition. LAMS removal should occur after cross-sectional imaging that demonstrates resolution of the hematoma and obstruction.

DISCLOSURE

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Abbreviations: GOO, gastric outlet obstruction; LAMS, lumen-apposing metal stent; TPN, total parenteral nutrition.

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