VIDEO CASE REPORT

A case of cystic paraduodenal pancreatitis with gastric outlet obstruction: technical pitfalls in EUS-guided gastroenteroanastomosis

Cecilia Binda, MD,[1] Gianmarco Marocchi, MD,[1,2] Chiara Coluccio, MD,[1] Monica Sbrancia, MD,[1] Carlo Fabbri, MD[1]

Cystic paraduodenal pancreatitis is part of a spectrum of diseases, collectively gathered under the term "paraduodenal pancreatitis," which involves the area between the duodenum, the pancreatic head, and the common bile duct.[1] Although common clinical presentation is constituted by abdominal pain, weight loss, and jaundice, association with gastric outlet obstruction (GOO) has been reported.[2] In recent years, the introduction of lumen-apposing metal stents (LAMSs) led to the diffusion of a novel technique to manage GOO. Endoscopic ultrasound (EUS)-guided gastroenteroanastomosis (EUS-GEA) has been shown to provide long-term luminal patency without the associated morbidity of a surgical intervention.[3]

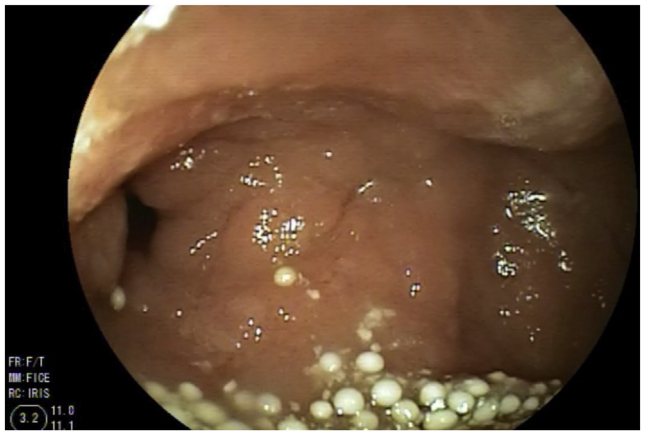

Figure 1. Endoscopic view showing duodenal stenosis.

We report on an 84-year-old man admitted in our unit for weight loss, vomiting, and jaundice. Esophagogastroduodenoscopy revealed the presence of a duodenal stenosis involving the major duodenal papilla without evidence of malignancy at the histologic examinations (Fig. 1). A computed tomography (CT) scan showed the presence of a cystic paraduodenal pancreatitis. At multidisciplinary evaluation, surgery was excluded and an EUS-GEA was proposed (Video 1, available online at www.giejournal.org).

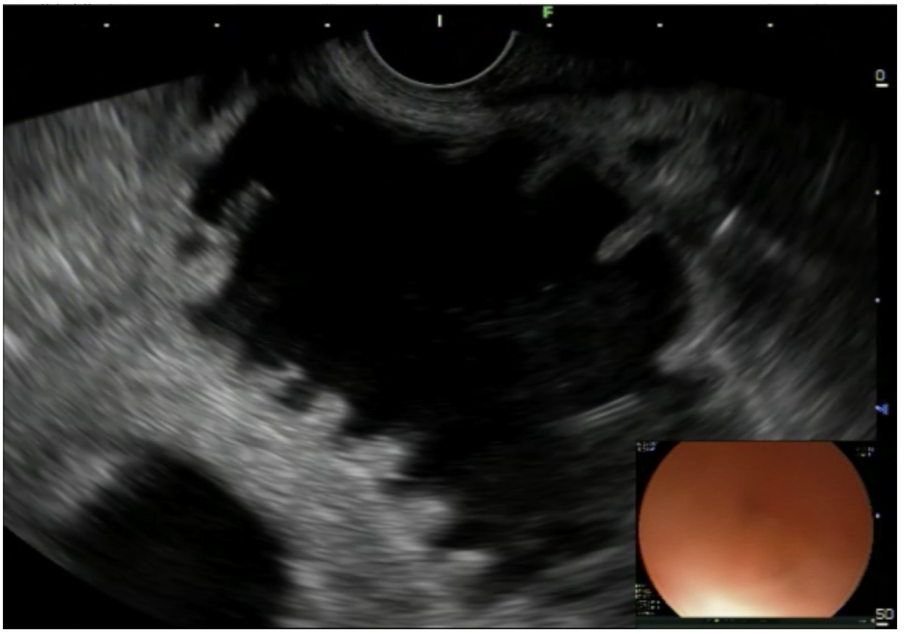

Figure 2. Small-bowel loop filled with saline solution, contrast medium, and indigo carmine.

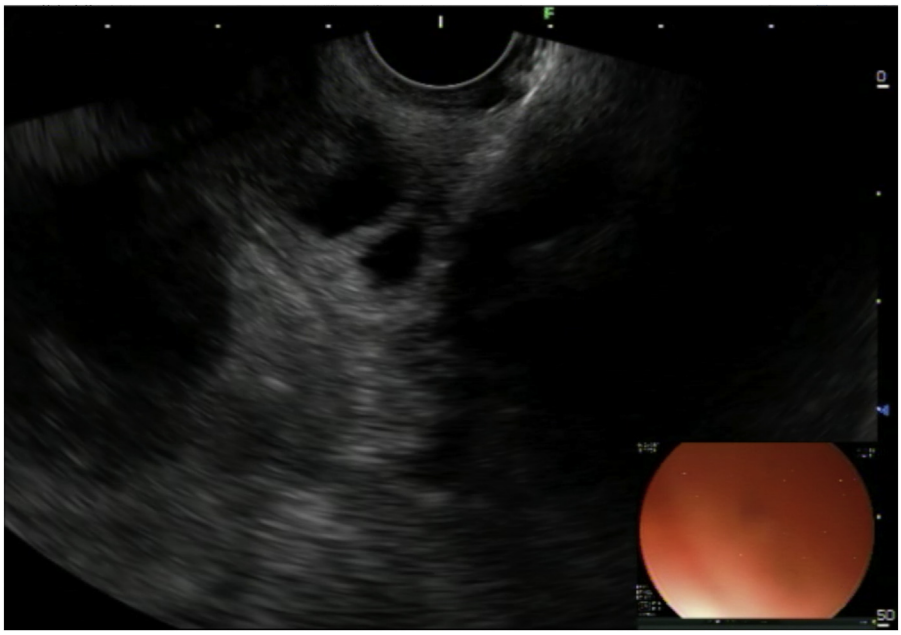

Figure 3. Guidewire insertion through the electrocautery-enhanced lumen-apposing metal stent, leading to intestinal loop displacement.

Figure 4. Tip of the electrocautery-enhanced lumen-apposing metal stent displaced outside the intestinal loop after the introduction and manipulation of the guidewire.

EUS-GEA was preceded by pyloric balloon dilation because of the presence of an inflammatory stricture, to have a direct visualization of the duodenal stenosis, and to make irrigations of the downstream intestinal loop with saline solution, contrast medium, and indigo carmine directly through the working channel of the echoendoscope (Fig. 2). The target loop was individuated and, after confirming the correct positioning with aspiration of indigo carmine through a 19-gauge needle, was punctured with an electrocautery-enhanced lumen-apposing metal stent (EC-LAMS) by using a free-hand technique. Then a guidewire was inserted through the EC-LAMS to maintain access into the target loop and safely perform stent deployment (Fig. 3), but the manipulation of the guidewire pushed the jejunal loop far from the gastric wall. On EUS imaging, the tip of the EC-LAMS appeared displaced

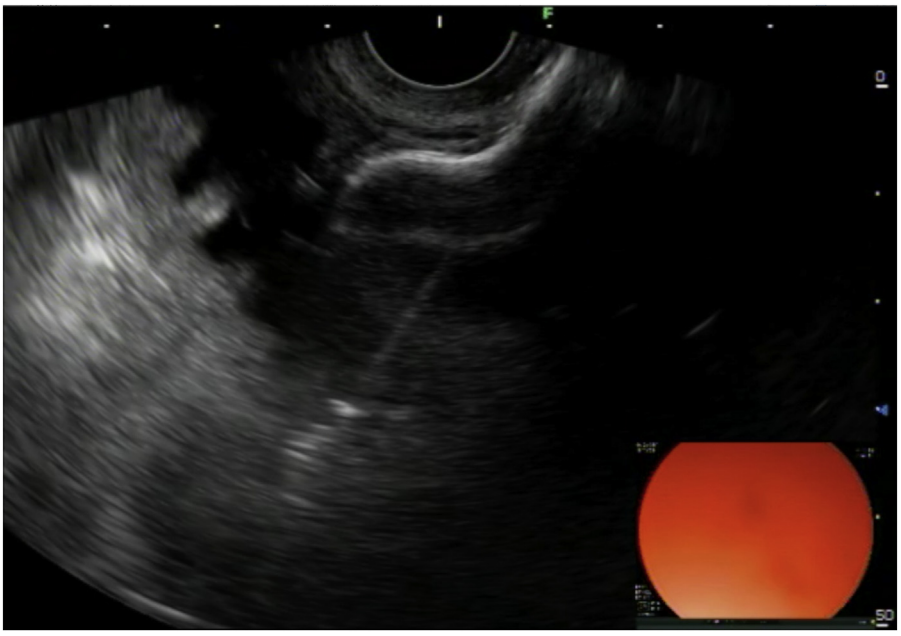

Figure 5. Stent deployment after reinsertion of the electrocautery-enhanced lumen-apposing metal stent through the previous access.

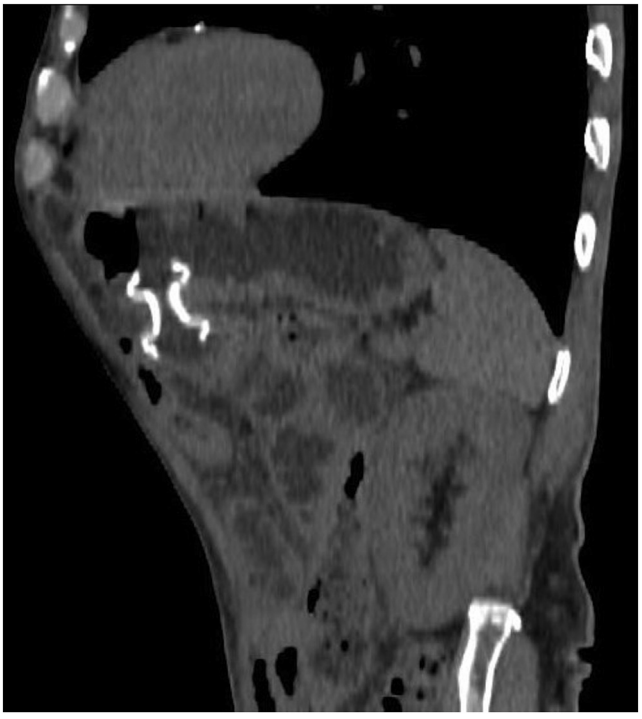

Figure 6. CT scan performed 1 month later showing the electrocautery-enhanced lumen-apposing metal stent connecting the gastric lumen and the small-bowel lumen.

immediately outside the small-bowel wall (Fig. 4). After removing the guidewire and maintaining access into the gastric wall and the target loop under EUS-view, the EC-LAMS was immediately reinserted in the target loop and the 20- × 10-mm stent was deployed (Fig. 5). The outflowing of water and indigo carmine in the stomach confirmed the success of the procedure. No delayed adverse event occurred, and enteral feeding was begun 2 days later. A CT scan confirmed the correct positioning of the stent (Fig. 6). At 12-month follow-up, the duodenal stenosis did not resolve, the LAMS was still in place, and the patient continued to feed orally, achieving weight gain; he had a readmission for jaundice, for which he underwent a percutaneous transhepatic drainage.

In conclusion, EUS-GEA is a minimally invasive technique for patients with GOO secondary to malignant and benign strictures.[3,4] Despite excellent technical and clinical success, adverse events occur at a rate of 12%[5,6]; therefore, technical issues must be carefully considered to avoid the possibility of stent misdeployment. Differently from endoscopic retrograde cholangiopancreatography, the role of the guidewire in performing EUS-GEA seems not to be mandatory, and a total free-hand LAMS insertion technique could be advisable.

DISCLOSURE

Carlo Fabbri is consultant for Boston Scientific and speaker for Steris.

Abbreviations: EC-LAMS, electrocautery-enhanced lumen-apposing metal stent; EUS-GEA, EUS-guided gastroenteroanastomosis; GOO, gastric outlet obstruction; LAMS, lumen-apposing metal stent.

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Gastroenterology and Digestive Endoscopy Unit, Forlì-Cesena Hospitals, AUSL Romagna, Forlì-Cesena, Italy (1), Department of Medical and Surgical Sciences, Alma Mater Studiorum, University of Bologna, Bologna, Italy (2).

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