



Creation of an esophageal jejunal anastomosis for a blind esophagus using a lumen-apposing metal stent

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A 72-year-old man with a history of hypertension, end-stage renal disease on dialysis, type 2 diabetes, and gastric cancer after undergoing total gastrectomy and esophageal jejunal anastomosis at an outside hospital presented to our hospital with progressive food intolerance. His postoperative course was complicated by an ischemic bowel with resection of two-thirds of the distal small bowel with primary anastomosis. He was eventually well enough for discharge to a skilled nursing facility.

At the time of discharge, he was on total parenteral nutrition and a soft-food diet. Over a period of 60 days, he developed progressive dysphagia while at the skilled nursing facility, which progressed to complete intolerance of oral secretions. He was readmitted to the outside hospital, and a CT scan with oral contrast revealed a complete obstruction in the distal esophagus with no passage of contrast into the small bowel. He was transferred to our hospital for further care.

An initial endoscopy revealed a completely blind esophagus 40 cm from the incisors (Fig. 1). In an attempt to identify the small-bowel lumen, the blind end of the esophagus

was probed with a wire, and bite-on-bite cold forceps biopsy was performed. However, no lumen could be identified. In consultation with interventional radiology and the surgical service, the patient was presented with options for restoring bowel continuity. He opted for attempted endoscopic therapy (Video 1, available online at www.VideoGIE.org).

A linear-array, oblique-viewing echoendoscope was used to identify the jejunal limb, which was in close approximation to the blind esophagus. At this site, hyperechoic material was identified and appeared to be surgical sutures or staples. Under EUS guidance, the jejunal limb was punctured using a 19-gauge needle. Injection of methylene blue saline solution and omnipaque contrast was performed to confirm luminal position fluoroscopically and to distend the target jejunal limb to facilitate stent placement.

Luminal position of the needle was confirmed under EUS and fluoroscopic guidance (Fig. 2). Distention of the jejunal limb with 10-mL injections of saline solution was initially challenging. Therefore, just before removal of the 19-gauge needle, 120 mL (two 60-mL syringes) of saline



Figure 1. The blind esophageal limb seen on the initial upper endoscopy.

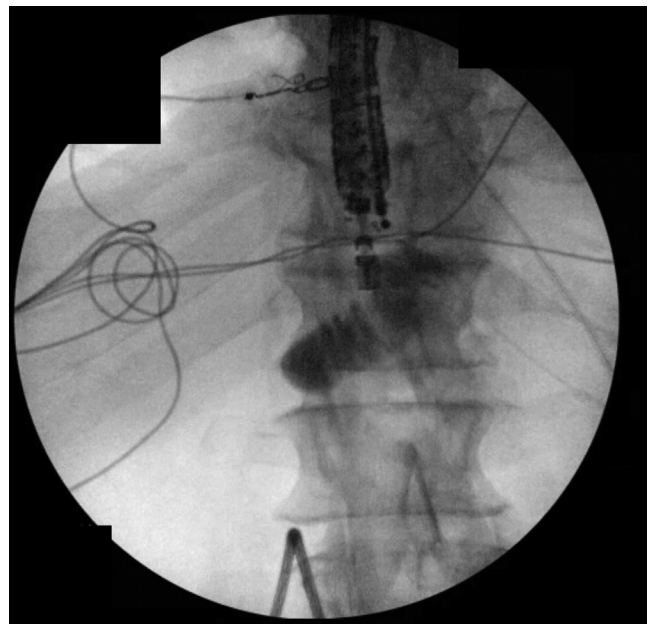


Figure 2. Fluoroscopic image showing contrast within the jejunal limb after injection with a 19-gauge FNA needle.

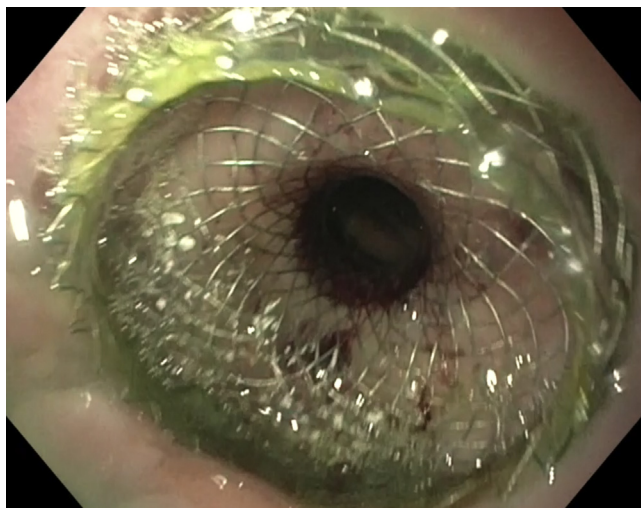


Figure 3. Esophagus after successful deployment of lumen-apposing metal stent. The jejunal lumen can be seen on the distal side of the stent.

solution was rapidly infused into the jejunal limb, which aided distention. We also noted resistance to passage of the 19-gauge needle when puncturing the fibrotic scarred anastomosis and anticipated that electrocautery would be necessary to successfully penetrate the anastomotic fibrotic scar.

After insufflation of the jejunal limb with saline solution, an electrocautery-enhanced, 15-mm luminal diameter lumen-apposing metal stent (AXIOS; Boston Scientific, Boston, Mass, USA) was used to puncture into the jejunal limb. The distal stent flange was deployed within the jejunal limb and was brought into close apposition with the jejunal wall. The stent was then successfully deployed with the distal end within the jejunum and the proximal end within the esophagus (Fig. 3).

To further secure the stent in position and facilitate early diet advancement, the stent was dilated to 12 mm using a continuous radial expansion balloon. A CT scan with oral contrast was obtained the following day and revealed a patent stent, with oral contrast passing from the esophagus and into the jejunum and distal bowel without leak (Fig. 4).

The patient was advanced from a liquid to a soft-food diet and tolerated this well without pain or vomiting. The patient was seen in the outpatient clinic 4 weeks after the procedure and had been gaining weight. He continues to tolerate a regular stent diet (eg, no raw vegetables, no tough meats). We plan to perform a repeat endoscopy 8



Figure 4. CT scan showing patent stent, with contrast passing from the esophagus into the jejunal limb without evidence of leak.

weeks after initial stent placement for assessment and possible stent removal. If necessary, the tract will be dilated and treated with submucosal Kenalog injection to reduce recurrent fibrosis.

This case demonstrates the off-label use of a lumen-apposing metal stent as a possible option for restoring bowel continuity in a patient with complete anastomotic occlusion of an esophageal jejunal anastomosis.

DISCLOSURE

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