

## Endoscopic jejunojejunostomy by use of a lumen-apposing self-expandable metal stent for treatment of obstructed efferent loop after subtotal gastrectomy with Roux-en-Y-reconstruction

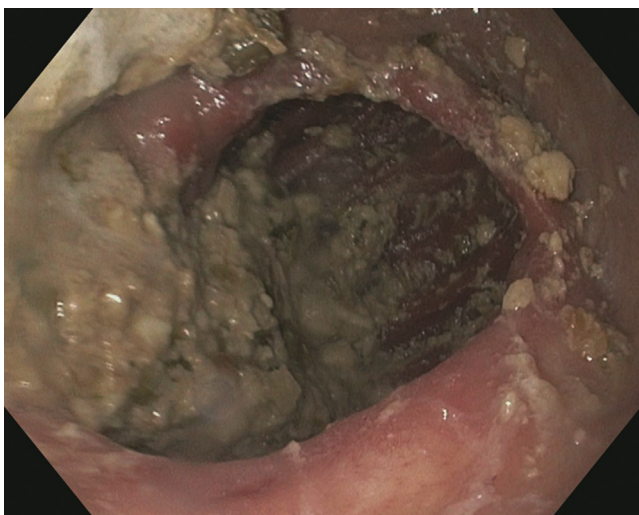


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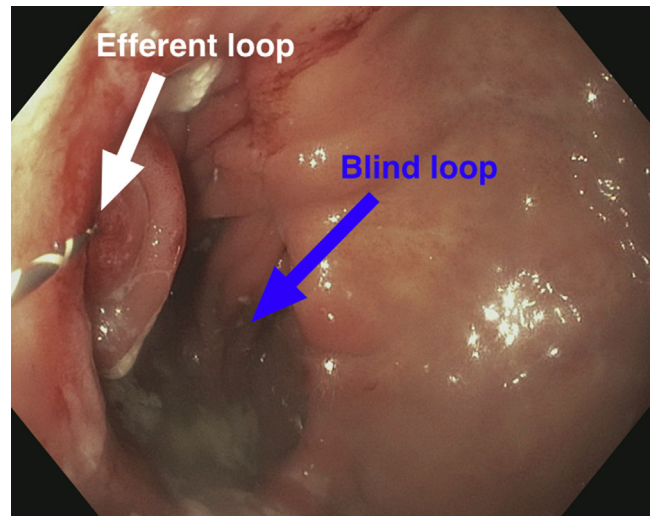
We report the case of a 58-year-old man who had undergone gastric resection with end-to-side gastrojejunostomy and Roux-en-Y reconstruction because of gastric cancer 9 months previously. During follow-up he experienced epigastric postprandial pain and recurrent vomiting. Endoscopy revealed kinking of the efferent jejunal loop at the site of the gastrojejunostomy, which caused food retention in the remaining parts of the stomach and in a dilated blind loop (Figs. 1 and 2).

For treatment of the obstructed/kinked efferent loop, we decided to perform endoscopic jejunojejunostomy using a lumen-apposing stent (LAS), the AXIOS stent (Boston Scientific, Marlborough, Mass) (Video 1, available online at [www.VideoGIE.org](http://www.VideoGIE.org)). The kinked efferent loop therefore was endoscopically (GIF H 180J; Olympus, Hamburg, Germany) intubated, and a filled 20-mm CRE balloon catheter (Boston Scientific) was placed in the efferent loop. Then an EUS endoscope (GF-UCT-180; Olympus) was inserted into the blind loop, and the filled balloon catheter in the efferent loop was visualized on EUS (Fig. 3) and served as a target for EUS-guided puncture (Fig. 4) of the

efferent loop. The LAS was inserted, and the delivery device was advanced into the efferent loop by electrocautery (Fig. 5). Finally, the LAS (15 mm × 10 mm) was deployed, and balloon dilation of the stent



**Figure 1.** Food retention in remaining part of the stomach.

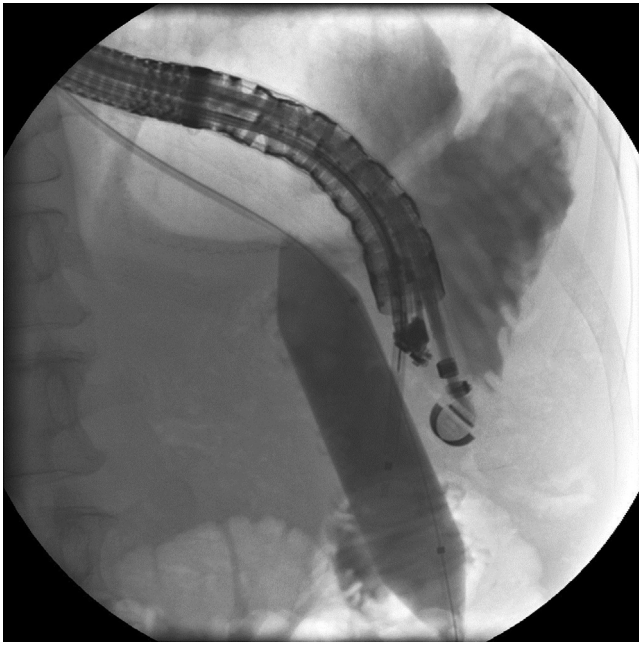


**Figure 2.** Kinked efferent loop (guidewire inserted) and blind loop at site of gastrojejunostomy.

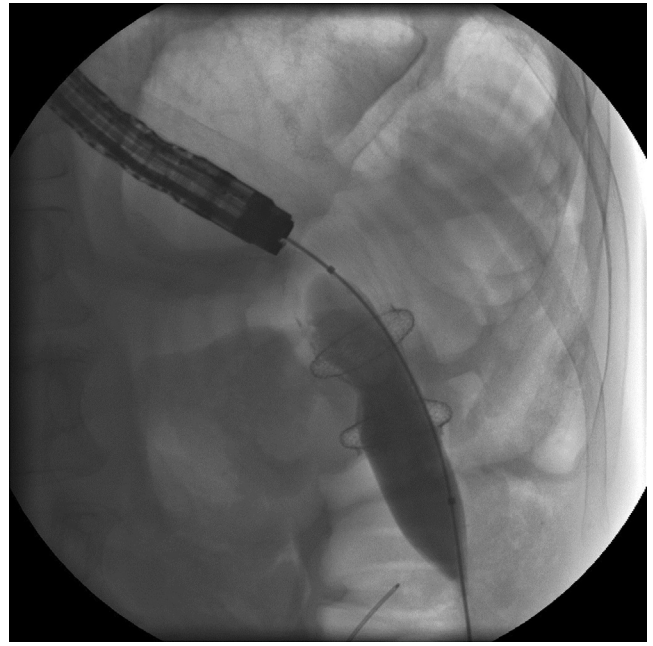


**Figure 3.** Filled dilation balloon in efferent loop; EUS view of blind loop.

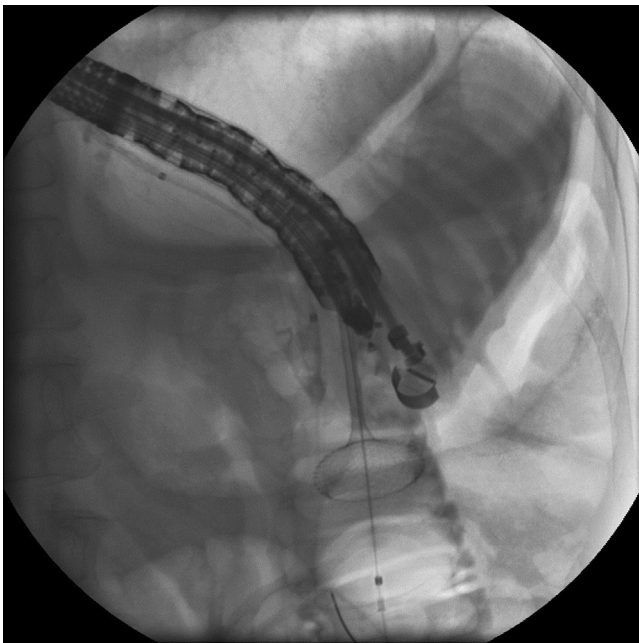
Written transcript of the video audio is available online at [www.VideoGIE.org](http://www.VideoGIE.org).



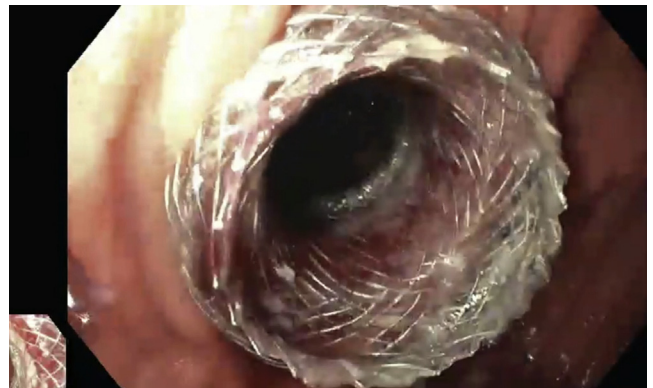
**Figure 4.** Puncturing procedure.



**Figure 6.** Dilation.



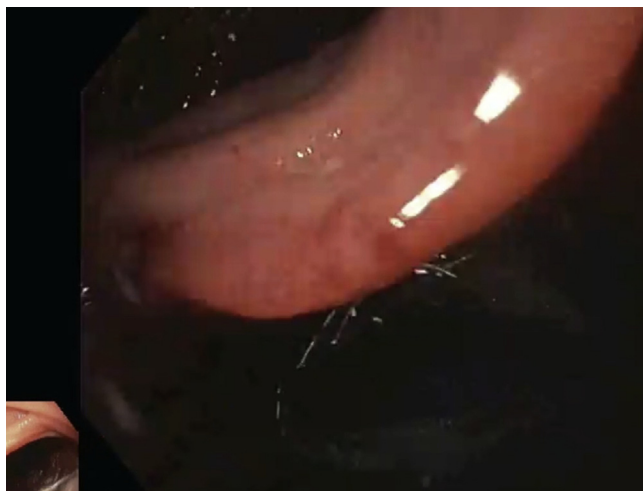
**Figure 5.** Deployment of lumen-apposing stent.



**Figure 7.** Anastomosis.

with a 15-mm CRE balloon catheter (Boston Scientific) was performed (Fig. 6). The newly made interenteric anastomosis between the blind and efferent loops (Fig. 7) could be intubated with the endoscope and seen from the site of the gastrojejunostomy (Fig. 8). It allowed food to pass directly into the lower parts of the jejunum.

Endoscopic inspection on the following day revealed correct placement of the stent without any signs of perforation or bleeding. Furthermore, no more food retention in the remaining parts of the stomach or in the blind loop was observed. Examination by swallowing of contrast dye showed rapid passage of the contrast dye from the stomach through the LAS into the efferent loop without filling of the blind loop (Fig. 9). The patient's symptoms soon improved after the procedure, and he was discharged. Unfortunately, he had a recurrence in the locoregional lymph nodes and therefore received palliative chemotherapy. Until his death 4 months later he did not have any signs of recurrent loop obstruction.



**Figure 8.** Anastomosis from site of gastrojejunostomy.



**Figure 9.** Passage of contrast dye through stent without filling of the blind loop.

There is no standard treatment of efferent loop obstruction. Surgery and stent placement in the efferent loop have been described. Surgery has a high peri-interventional risk, and stent placement at this location is usually not durable. EUS-guided interenteric anastomosis has been described

mainly in patients with malignant gastric outlet obstruction, with high technical and clinical success rates.<sup>1-3</sup> In comparison with enteral stenting, EUS-guided gastroenterostomy (GE) showed comparable safety and fewer symptom recurrences.<sup>4</sup> Another recently published study comparing endoscopic GE versus surgical GE showed noninferiority of endoscopic GE in terms of clinical success, and there was a trend toward fewer adverse events.<sup>5</sup>

On the basis of our experience with this case and in consideration of the good outcome in our patient, the use of an LAS might be a safe and effective way to treat efferent loop obstruction after gastrectomy. Furthermore, the use of a filled-balloon catheter might facilitate EUS-guided puncture of jejunal loops.

## DISCLOSURE

*All authors disclosed no financial relationships relevant to this publication.*

*Abbreviations: GE, gastroenterostomy; LAS, lumen-apposing stent.*

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