VIDEO CASE REPORT

Endoscopic reversal of Roux-en-Y anatomy for the treatment of recurrent marginal ulceration

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Marginal ulceration is one of the most common adverse events after Roux-en-Y gastric bypass (RYGB). The incidence rate of marginal ulcer may be as high as 7%.[1-3] Antisecretory therapy is the first-line treatment. However, more than one-third of patients undergo surgical revision for intractable ulcers.[4,5] The surgical outcome is excellent overall, except for smokers.[5,6] Smokers with intractable marginal ulcer pose an extreme management challenge to clinicians. In this video (Video 1, available online at www.VideoGIE.org), we describe an active-smoker patient with recurrent and intractable marginal ulcer despite multiple surgical revisions and use of maximal medical therapy who was successfully treated with endoscopic reversal of RYGB.

CASE PRESENTATION

A 56-year-old woman presented with poor oral intake, malnutrition, and persistent abdominal pain. She had undergone RYGB for weight loss approximately 18 years earlier. She had had recurrent marginal ulcers for almost 10 years, complicated with bowel perforations twice and stomal stricture. She underwent surgical revisions twice at 6 and 16 months before her presentation. However, her marginal ulcer recurred and did not heal despite maximal medical therapy with proton pump inhibitor twice daily and sucralfate 4 times daily for more than 6 months, and she continued to smoke. Figure 1 shows her marginal ulcer on endoscopy.

Treatment options were discussed with the multidisciplinary care team and the patient. Surgical options were limited. Her previous surgery took approximately 3 hours for lysis of adhesions. The decision was made to proceed with a gastrogastric fistula creation and endoscopic suturing closure of the gastrojejunostomy for a full reversal of RYGB anatomy.

The first step was to perform an EUS-guided gastrogastric fistula creation with a 15- × 10-mm lumen-apposing metal stent. The second step was to use an endoscopic suturing system (OverStitch; Apollo Endosurgery, Austin, Tex, USA) to close the gastrojejunostomy stoma. Figure 2 shows the gastric pouch after the endoscopic revision.

This patient did well postoperatively. A postoperative CT showed a well-positioned and patent lumen-apposing metal stent (Fig. 3). She was continued on proton pump inhibitor therapy and had no postprocedural adverse

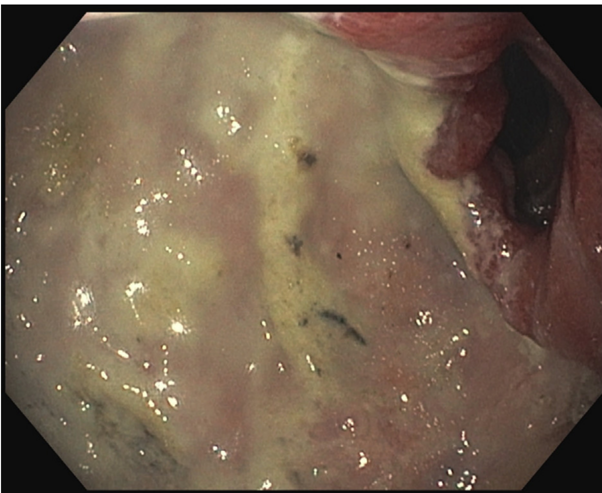

Figure 1. Upper endoscopy image showing deep and nearly circumferential marginal ulcer at the jejunum.

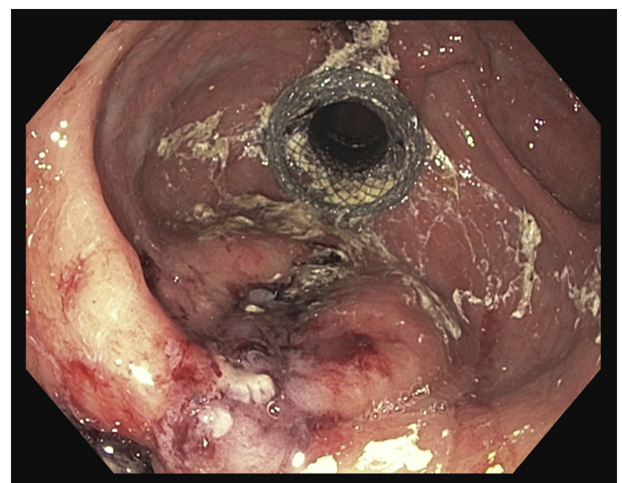

Figure 2. Upper endoscopy image showing postendoscopic revision gastric pouch.

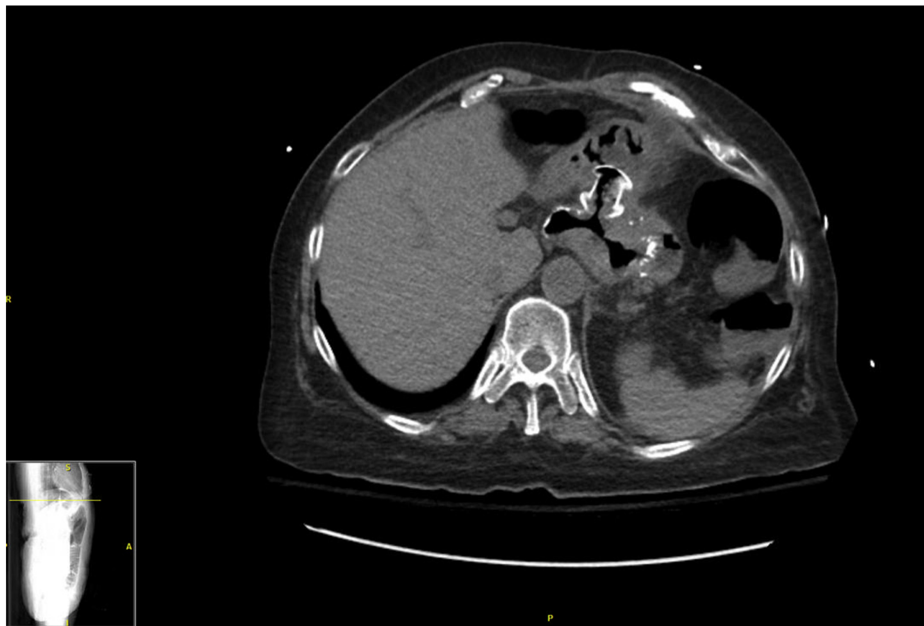

Figure 3. CT of the abdomen after intervention showing patent lumen-apposing metal stent connecting gastric pouch and gastric remnant.

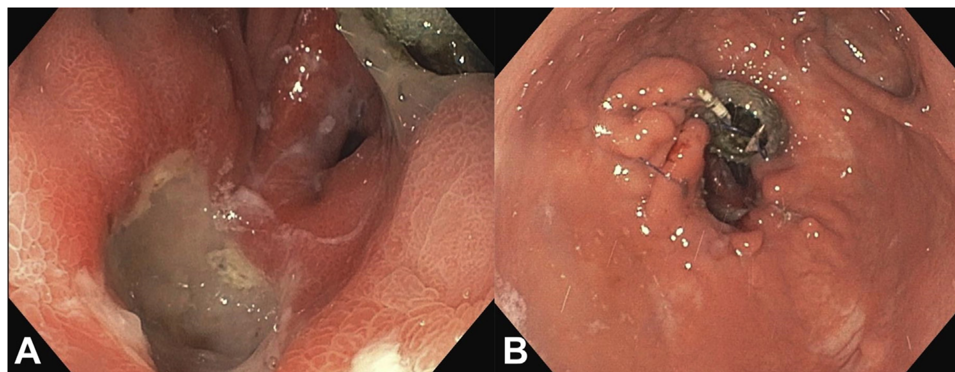

Figure 4. Upper endoscopy images showing marginal ulcer at the jejunum **(A)** and patent lumen-apposing metal stent **(B)** at the 18-month follow-up.

events. At 18-month follow-up, she had no abdominal pain, had no recurrence of perforation, and was able to tolerate a regular diet despite continued smoking. A follow-up endoscopy at 18 months revealed that the marginal ulcer had improved considerably, from nearly circumferential to one-third of the original size. This ulcer was successfully oversewn to close the ulcer bed. The lumen-apposing metal stent appeared to be in good position and patent. It was left in place for gastric diversion of food from the marginal ulcer to allow ulcer healing (Fig. 4).

In conclusion, endoscopic reversal of RYGB anatomy was able to provide good outcomes in a case with recurrent marginal ulcer after revisional surgery that was refractory to medical therapy. Further study to validate these findings with a long-term outcome assessment is warranted.

DISCLOSURE

Dr Abu Dayyeh is a consultant for Metamodix, BFKW, DyaMx, Boston Scientific, USGI medical, and Endo-TAGSS and received research support form Apollo Endosurgery, USGI, Spatz Medical, Boston Scientific, GI Dynamics, Cairn Diagnostics, Aspire Bariatrics, and Medtronic. He served as a speaker for Johnson and Johnson, Endogastric Solutions, and Olympus. Dr Storm is a consultant for Apollo Endosurgery, ERBE, GI Dynamics, and Endo-TAGSS, and the recipient of research support from Boston Scientific. All other authors disclosed no financial relationships.

Abbreviation: RYGB, Roux-en-Y gastric bypass.

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