Endoscopic rescue of anastomotic dehiscence after urgent gastric bypass revision

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INTRODUCTION

Adverse events are rare after bariatric surgery; however, leaks can lead to high morbidity. A large population study demonstrated a rare need for endoscopic management, most commonly endoluminal stent therapy. Unfortunately, many patients eventually needed surgical intervention and patients with stents had a notable rate of readmissions.1 Although stents are a valuable tool, newer technologies have expanded the toolbox to address difficult gastrointestinal adverse events.2,3 We present a challenging case of a gastrojejunal anastomotic disruption in a Roux-en-Y patient after recent urgent surgical revision that was rescued with total endoscopic therapy.

CASE REPORT

A 79-year-old individual with previous vertical banded gastroplasty converted to a Roux-en-Y was hospitalized for recurrent marginal ulcer bleeding. Endoscopic management failed after 2 attempts. They underwent urgent surgical revision of the gastrojejunal anastomosis. Rising
leukocytosis was noted 8 days later. A CT scan demonstrated concerns for anastomotic leak (Fig. 1). Urgent endoscopy demonstrated a near total anastomotic dehiscence with large separation of the bowel and abscess cavity (Fig. 2). The abscess cavity was washed out, and the decision was made to use endoluminal vacuum therapy (eVAC) to debride the abscess and manage the leak (Fig. 3).

Endoscopy 4 days later revealed an infection-free cavity, although the patient exhibited persistent dehiscence. Endoscopic suturing was used to reapproximate the anterior 180 degrees of the anastomosis (Fig. 4). Given the large cavity, eVAC therapy was resumed to control the abscess. To avoid prolonged eVAC therapy requiring hospitalization, a percutaneous drain was placed allowing the remaining posterior dehiscence to be endoscopically sutured together, thus rescuing the near-total anastomotic dehiscence. To buttress the repair, a covered esophageal stent was deployed across the anastomosis and a nasojejunal feeding tube was placed to allow for enteric feeds (Fig. 5). We were then able to discharge the patient to rehabilitation.

Later in clinic, the patient was tolerating full liquids, and thus the feeding tube was removed. On repeat endoscopy 20 days later, the stent was removed revealing an intact gastrojejunal anastomosis (Fig. 6).

Figure 3. Endoluminal vacuum therapy applied to manage the contaminated abscess cavity.

Figure 4. Endoscopic suturing to reapproximate the anastomotic disruption. The suture pattern was taken from the jejunum (A) to the gastric pouch (B) starting on the anterior aspect first (A, B), and then on the posterior aspect of the anastomosis (C). The final suture cinch deployed after reapproximation (D).
On-the-table fluoroscopy confirmed no ongoing leakage. The patient returned home, advanced to a solid diet, and was doing well on subsequent follow-up.

DISCUSSION

As more weight loss surgeries are being performed, a notable volume of rare adverse events may happen. Traditional methods of managing events after bariatric surgery often require morbid return trips to the operating room. Endoscopic therapy offers tools and techniques to address surgical issues in a noninvasive fashion (Table 1). Traditionally, stent therapy has been used to manage anastomotic leaks. However, stent therapy can lead to its own host of issues from stent migration to debilitating reflux and chest and abdominal pain. Furthermore, use of stent therapy requires multiple return trips for removal and replacement as the tissue heals. It is the opinion of the authors that stent therapy does not actually promote healing. The radial force of stents theoretically put tension on the outlying tissue that may compromise capillary blood flow. Stents are merely a conduit for diverting GI contents away from a leak. Novel endoscopic therapies have allowed for a more surgical technique to be applied through endoscopy. eVAC therapy allows for debridement and wound healing. Endoscopic suturing is a game-changer and has revolutionized the ability to perform endoscopic tissue approximation. Using these techniques, we demonstrate the successful rescue of a near total anastomotic disruption after urgent gastric bypass revision, obviating the need for a morbid surgical procedure (Video 1, available online at www.giejournal.org).

DISCLOSURE

All authors disclosed no financial relationships.

Abbreviation: eVAC, endoluminal vacuum therapy.

| Device            | Generic name | Trade name       | Manufacturer        | City      | State      |
|-------------------|--------------|------------------|---------------------|-----------|------------|
| Upper Endoscope   | Therapeutic  | GIF-2T180        | Olympus             | Center Valley | Pennsylvania |
| Suture            | OverStitch   | OverStitch       | Apollo Endosurgery  | Austin     | Texas      |
| Esophageal Stent   | Stent        | EndoMax          | Merit Medical       | Jordan     | Utah       |
| Sponge            | Wound Vac    | Negative Pressure Therapy | 3M KCI | San Antonio | Texas      |
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