Case report

Unusual cause of bowel obstruction after laparoscopic sleeve gastrectomy

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As obesity continues to become an epidemic in the United States, bariatric surgery is becoming more common. The advancement of laparoscopic bariatric surgery has caused general surgeons to face different complications in patients after bariatric surgery. These complications can be very specific to the operation performed. To the authors’ knowledge, they are presenting the first report of acute small bowel obstruction related to laparoscopic sleeve gastrectomy 1 year before presentation. Proximal small bowel obstruction in patients who had laparoscopic sleeve gastrectomy is likely to be related to thick adhesions to the actual sleeve or staple line. This is unlikely to resolve with bowel rest and stomach decompression. With this group of patients, earlier operative intervention is warranted.

Case and surgical treatment

A 52-year-old male status post an uneventful laparoscopic sleeve gastrectomy 1 year prior with a 90-pound weight loss presented to an outside hospital emergency department with complaints of abdominal pain, nausea, and emesis. The patient underwent a computerized tomography scan, which demonstrated abnormal dilation of his gastric sleeve as well as his proximal small bowel in the left upper quadrant with a clear transition point (Fig. 1). He subsequently underwent a small bowel follow-through, which showed a partial jejunal obstruction (Fig. 2). At that time, the authors’ bariatric center was notified, and he was transferred for further management.

He went to the operating room for a diagnostic laparoscopy. Dilated loops of small bowel were visualized in the left upper quadrant. The sleeve gastrectomy was examined, and an omental attachment was found to be adherent to the staple line of the sleeve gastrectomy, creating a band that caused an obstruction (Fig. 3). Lysis of adhesions was performed, and once the band had been taken down, the obstruction had been relieved (Fig. 4). This highlights an unusual cause of small bowel obstruction after laparoscopic sleeve gastrectomy. Surgeons treating patients with a small bowel obstruction after a laparoscopic sleeve gastrectomy should consider earlier operative intervention compared with other patients.

Discussion

As morbid obesity continues to become an epidemic in the United States, more patients will start to undergo bariatric surgery [1]. While safe, bariatric surgery does come with complications, such as bowel obstructions. Bowel obstruction could be unrelated to the actual bariatric operation but is often associated to the altered anatomy or implant used for surgery.

Bowel obstructions have been seen in laparoscopic adjustable gastric bands (LAGB). Slippage of the band is the most common complication with LAGB, and is most likely cause of reoperation [2]. It has been seen as high as 20% in certain studies and this usually causes gastric obstruction as opposed to intestinal obstruction [3–8]. There have been other reports of

Fig. 1. Computerized tomography (CT) scan demonstrating dilated gastric sleeve (single arrow) and decompressed small bowel (double arrows).
intestinal obstruction from the tubing system as well. Hamed et al. reviewed the literature associated with small bowel obstruction after LAGB. They found 8 cases associated with bowel obstruction with the tubing system [9]. In 5 of those cases an internal hernia had formed secondary to the tubing system, and in 1 case, it caused a cecal volvulus [10,11].

Small bowel obstruction is a known complication that is associated with laparoscopic Roux-en-Y gastric bypass. Bowel obstruction may occur secondary to internal hernias and can be difficult to diagnose especially in patients with intermittent obstructive symptoms where radiologic studies could be completely normal if during a nonobstructive episode [12,13]. Internal hernias may arise from 3 locations typically in laparoscopic Roux-en-Y gastric bypass: the jejunoojunosotomy mesenteric defect, Petersen’s space, and the transverse mesocolic defect in the retrocolic approach [14]. However, to the authors’ knowledge, small bowel obstruction after sleeve gastrectomy secondary to an omental attachment to the staple line of the gastric sleeve to a loop of small bowel has not been reported in the literature, making the authors’ case very unique. In the authors’ case, it is unclear as to why an adhesive band formed between the staple line of the stomach and a loop of small bowel.

In the authors’ institution, they use absorbable buttressing material to reinforce their staple line. During the case, there was no evidence of retained buttressing material to suggest it as the cause of adhesions and obstruction. Additionally, in sleeve gastrectomy, there are no major anatomic alterations, potential spaces, or tubing systems that could create an obstruction, making the diagnosis of adhesions as a cause for obstruction after sleeve gastrectomy more straight forward.

Conclusion

Clinicians, especially general surgeons, treating patients with a small bowel obstruction after laparoscopic sleeve gastrectomy should consider earlier operative intervention compared with other patients. This is becoming increasingly more important as the number of laparoscopic gastric sleeves continues to rise. If an institution is not familiar with treating bariatric patients, they should transfer the patient to a bariatric center if the patient is clinically stable.

Disclosures

Dr. Rami Lutfi is a consultant for Gore, Allergan and Ethicon. Dr. Justin Sobinsky has no conflict of interest.

References


