

CONSTANTINE T. FRANTZIDES, JOHN G. ZOGRAFAKIS, SCOTT N. WELLE, AND TIMOTHY M. RUFF

Revisional Bariatric Surgery

The videos associated with this chapter are listed in the Video Contents and can be found on the accompanying DVDs and on Expertconsult.com. 

Operative revision of failed bariatric surgery is not only a technical challenge but also a logistic one. It is of primary importance that strict criteria be followed for considering patients for revisional bariatric surgery. In particular, if the main reason for reoperation is inadequate weight loss, then the burden is to demonstrate a surgically correctable deficiency. Although the rate of revisions may be increasing, this is by no means a new problem. In light of the increasing number of surgical procedures performed, the need for revisional operations is also on the rise.

Historically, the first two widely performed operations for morbid obesity, the jejunioleal bypass (JIB) and stapled vertical banded gastroplasty (VBG), were associated with a high rate of reoperation. The jejunioleal bypass caused nutritional deficiencies and diarrhea. Because of these problems, many patients had to have their jejunioleal bypass revised or reversed. This procedure is no longer being performed and has been replaced by other malabsorptive procedures, including the biliopancreatic diversion (BPD) and the improved variation of the biliopancreatic diversion with or without duodenal switch (DS). The VBG resulted in insufficient weight loss, primarily because of mechanical staple line failure. Over the years, these operations have required revision, conversion to another procedure, or complete reversal. The laparoscopic Roux-en-Y gastric bypass (LRYGB) has emerged as the gold standard for weight loss surgery.

Currently, the most frequently performed operations, LRYGB and laparoscopic adjustable gastric banding, also require revision for complications or unsatisfactory weight loss. The revision rate for the adjustable gastric banding is at least 10% during the first 2 years for either device-related problems or poor weight loss. Similarly, the revision rate for gastric bypass has been shown to be at least 5% to 10% over the first 5 years.

OPERATIVE INDICATIONS

Although the indications to perform primary weight loss surgery for morbid obesity follow the National Institutes of Health guidelines, the indications for performing revisions are vaguely defined. The surgical options are many and may include revision, conversion to another procedure, or complete reversal.

The main indication for revisional surgery is inadequate weight loss after surgery. Eating habits and exercise routines should be reevaluated before pursuing surgical options. It is

well recognized that successful weight loss is invariably associated with behavioral and diet modifications and dedicated exercise.

If structural issues, however, are the cause of the failure of the primary operation, further workup is necessary. Obtaining prior operative records may be helpful in future surgical planning; this unfortunately is not always possible. To delineate postsurgical anatomy, esophagogastroduodenoscopy (EGD) and upper gastrointestinal contrast studies are recommended. These diagnostic modalities allow for evaluation of the gastric pouch, the anastomosis, and the presence of staple line disruption, fistulas, ulcers, or strictures. In addition, the presence of a hiatal hernia and gastroesophageal reflux can be shown. Biopsies of the gastric mucosa for *Helicobacter pylori* are recommended. A history of *H. pylori* infection (despite its appropriate eradication) has been shown to lead to postoperative complications.

The most common complications after jejunioleal bypass include chronic renal calculi, malnutrition, bacterial overgrowth, and even renal or hepatic insufficiency. The current recommendation for patients presenting with complications from a previous jejunioleal bypass is to undergo reversal.

After the purely malabsorptive jejunioleal bypass fell out of favor in the 1960s and early 1970s, VBG became the preferred bariatric procedure. The main reasons for reoperation of patients with VBG are dehiscence of the staple line, weight regain, and erosion of the polypropylene mesh or Silastic ring. Options for revision include conversion to an LRYGB or a vertical sleeve gastrectomy (VSG).

Although VBG has historically been abandoned as a primary weight loss operation, it did yield its successor, the laparoscopic adjustable gastric banding (LAGB). The adjustable gastric band has a well-documented reoperative rate exceeding 10% in the first 2 years for complications such as band slippage and migration, band erosion, and port- or catheter-related complications. Options for revision include band repositioning, replacement, or removal with or without conversion to another weight loss procedure. In the case of band erosion, revision may be performed as a staged procedure, initially removing the eroded band with gastric repair followed subsequently by definitive weight loss surgery, or in a single operation.

Indications for surgery after the LRYGB may include weight regain, nonhealing marginal ulcer, stricture at the gastrojejunostomy or jejunojejunostomy, or malnutrition with severe