

CONSTANTINE T. FRANTZIDES AND  
JOHN G. ZOGRAFAKIS

## Laparoscopic Gastric Bypass with Roux-en-Y Gastrojejunostomy

The surgical management of obesity has evolved dramatically since its inception in the early 1960s. Completely malabsorptive procedures including the jejunoileal intestinal bypass (JIB) were succeeded by purely restrictive procedures such as the vertical banded gastroplasty (VBG). Although the weight loss from the JIB was satisfactory, severe protein-calorie malnutrition, hepatic failure, and other malabsorptive complications led to the abandonment of this procedure. The VBG has fallen out of favor because of inadequate long-term sustained weight loss and many technical failures. In the mid- to late 1980s, open Roux-en-Y gastric bypass (ORYGB) evolved as the gold standard for weight-loss surgery. This is considered a hybrid operation because both restrictive and malabsorptive components are combined in order to maximize safe and sustained weight loss. With the advent of minimally invasive surgery and the availability of advanced laparoscopic instrumentation, the laparoscopic Roux-en-Y gastric bypass (LRYGB) has experienced exponential growth. The safety, efficacy, and popularity of the LRYGB has attracted more patients to consider surgical treatment who otherwise might not have sought such intervention.

The surgeon performing laparoscopic weight reductive procedures should have a background in bariatric surgery and advanced laparoscopic surgical skills. In order to advance an individual's laparoscopic surgical skills, surgeons may choose year-long surgical fellowships, week-long mini-fellowships, or a variety of intensive continuing medical education (CME) courses available at national meetings. Without question, a significant time investment is necessary in order to master the advanced laparoscopic surgical techniques required to complete these procedures.

### OPERATIVE INDICATIONS

The surgical treatment of morbid obesity evolved secondary to the unsatisfactory outcome of medical therapies for weight loss. Untreated morbid obesity places the patient at risk for multiple comorbid conditions and ultimately a shortened life span. Risk stratification is done with the body mass index (BMI); increasing BMI is associated with increasing medical risk and surgical complications. In March 1991, the National Institutes of Health Consensus Conference on Obesity concluded that (1) surgery is the only way to obtain consistent and permanent weight loss for patients with morbid obesity, and that (2) weight reductive

surgery is indicated for those patients with a BMI of greater than 40 kg/m<sup>2</sup>, as well as for those patients with a BMI of 35 to 39.9 kg/m<sup>2</sup> with associated medical comorbidities, including hypertension, diabetes, and obstructive sleep apnea. Patients should have documentation of failed efforts to lose weight. It is important for patients who seek weight-loss surgery to be educated regarding the risks and benefits of the bariatric procedure, as well as the postoperative dietary requirements that are essential for long-term success. Finally, neither surgery nor a dietary program alone will be successful without dedicated exercise by the patient.

Relative contraindications to a laparoscopic weight-loss procedure would include previous intra-abdominal open surgery, especially that of the foregut, and previous abdominal wall herniorrhaphy (with mesh). These relative contraindications are dependent upon the laparoscopic experience of the surgeon. In fact, laparoscopic gastric bypass may be performed safely after almost any laparoscopic or open surgery.

### PREOPERATIVE EVALUATION, TESTING, AND PREPARATION

Patients are often well informed prior to a surgical consultation, since a vast amount of educational information is available on the Internet. Patient education is paramount to a good outcome. Attendance at a preoperative weight-loss surgery seminar is encouraged, as well as completion of preoperative education classes. Other components of the preoperative work-up may include nutritional and psychological assessments. These tests may serve to identify those patients who may suffer from untreated psychiatric conditions such as major depressive disorder, binge eating, or drug abuse/alcoholism. Appropriate psychotherapy or counseling may be necessary before surgery. A thorough physical examination ultimately is performed by the primary surgeon, and then the decision to proceed with an open or laparoscopic procedure can be made. The risks and benefits specific to the procedure should be explained to the patient and family in detail so that informed consent can be obtained.

Many health insurance companies require the completion of a physician-supervised weight-loss program that includes a dietary