Acute Abdominal Pain in the Bariatric Surgery Patient

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KEYWORDS

• Anastomotic leak • Anastomotic stenosis • Stomal ulcer • Hernia • Dilatation • Band erosion • Band slippage • Gastric prolapse

KEY POINTS

- In general, bariatric procedures achieve weight loss by altering gastrointestinal absorption, restricting gastric size, or a combination of both.
- In bariatric patients, abdominal pain may be caused by complications specific to their particular surgical procedure or by nonspecific complications, such as surgical site infection, cholelithiasis, bleeding, and small bowel obstruction.
- The differential diagnosis of abdominal pain in the patient who has had a Roux-en-Y gastric bypass or a biliary pancreatic diversion includes anastomotic leak or stenosis, dumping syndrome, gastric remnant dilatation, stomal ulcer, and internal or incisional hernia.
- Following laparoscopic adjustable gastric banding, abdominal pain may be caused by esophagitis, hiatal hernia, gastroesophageal dilatation, band erosion, band slippage, gastric prolapse, stomal obstruction, or port infection.
- Patients who have had a sleeve gastrectomy may suffer from gastric leak, gastric stenosis, or gastroesophageal reflux.

INTRODUCTION

Obesity is present in epidemic proportions in the United States. Obese individuals are at increased risk of morbidity and mortality compared with those with normal body mass indices (BMIs).[1] Several studies have demonstrated the superiority of bariatric surgery over conventional therapy.[2–4] As a result, bariatric surgery has become more commonplace, and emergency physicians will undoubtedly encounter many

Disclosures: None.
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Emerg Med Clin N Am 34 (2016) 387–407
http://dx.doi.org/10.1016/j.emc.2015.12.004 **emed.theclinics.com**
0733-8627/16/$ – see front matter

patients who have undergone one of these procedures. This article reviews common bariatric surgery procedures, their complications, and the approach to acute abdominal pain in these patients.

OBESITY

Obesity is a widespread disease and essentially an evolving international epidemic even though it is not infectious in nature. In a study that examined data from the 2011 to 2012 National Health and Nutrition Examination Survey, more than one-third (34.9% or 78.6 million) of adults in the United States are obese. The age-adjusted prevalences of obesity by race are astounding: 47.8% of non-Hispanic blacks, 42.5% of Hispanics, 32.6% of non-Hispanic whites, and 10.8% of Asians.[5] The cost of obesity-related medical care is substantial, resulting in a 41.5% increase in per capita medical spending compared with adults of normal weight. In their article, Finkelstein and colleagues[6] estimate that these costs could amount to $147 billion per year.[6] Among the concomitant health care risks associated with obesity are heart disease, stroke, type II diabetes (DM), hypertension (HTN), hyperlipidemia (HLD), gallbladder disease, musculoskeletal disorders, and obstructive sleep apnea. Obese individuals also have an increased risk of mortality, dying 6 to 7 years earlier than those with a normal weight. Compounding the issue, obese smokers die 13 to 14 years earlier than non smokers with normal BMIs.[1]

CONVENTIONAL THERAPY

Diet and exercise are routinely promoted as integral parts of weight loss regimens by prominent laypeople and health care professionals. For example, healthier lifestyles have been advocated by First Lady Michelle Obama (the Let's Move campaign) and the National Football League (the Play 60 initiative). Unfortunately, lifestyle modifications may not be adequate for obese people trying to attain a healthier BMI. Several studies have shown that bariatric surgery results in greater improvements in BMI and higher rates of resolution of comorbidities, such as type II DM, HTN, and HLD, when compared with conventional therapy (including medication, lifestyle modifications, and education).[2–4]

BARIATRIC SURGERY ON THE RISE

Across the globe, the number of bariatric surgeries more than doubled between 2003 and 2011. In 2011, the United States and Canada combined, performed the greatest number of bariatric surgical procedures (101,645 cases or 29.8%) when compared with other countries worldwide. In the United States and Canada, the three most common procedures were Roux-en-Y gastric bypass (RYGB; 47,791 cases or 47.0%), adjustable gastric band (27,630 cases or 27.2%), and sleeve gastrectomy (SG; 19,486 cases or 19.2%). Of these, SG was the only one increasing in percentage of cases. Also of note, 18.6% of the 6705 bariatric surgeons worldwide reside in the United States and Canada alone.[7]

INCLUSION CRITERIA FOR BARIATRIC SURGERY

The formula to calculate BMI is weight (in kilograms) divided by height (in meters) squared. The National Institutes of Health and World Health Organization use BMI to classify degree of obesity and to aid in risk stratification. A normal BMI is 18.5 to 24.9 kg/m^2. A person with a BMI of 25 to 29.9 kg/m^2 is considered overweight. Obesity