

# Proton Pump Inhibitor Cuts Marginal Ulcers After Roux-en-Y Bypass

BY BRUCE JANCIN  
Denver Bureau

HONOLULU — Marginal ulceration is a common complication after Roux-en-Y gastric bypass surgery—and 6-12 months of post-operative prophylactic proton pump inhibitor therapy may protect patients at high risk, Dr. Jason A. Wilson reported at the annual meeting of the American College of Gastroenterology.

Dr. Wilson and coworkers reviewed the charts of 1,001 patients who underwent open or laparoscopic Roux-en-Y bypass at the Medical University of South Carolina, Charleston. In all, 226 patients developed GI symptoms leading to referral for upper GI endoscopy.

Endoscopy revealed that 44% of patients showed normal postsurgical anatomy. However, 36% of the 226 patients had an ulcer at the anastomotic margin, 13% had stomal stenosis, and 4% had staple line dehiscence, Dr. Wilson said.

The use of a proton pump inhibitor after the surgery was associated with a 68% reduction in the relative risk of marginal ulceration. Dr. Wilson speculated that marginal ulcers are caused by increased gastric acid production in the setting of surgically induced mucosal disruption and ischemia, and that proton pump inhibitor therapy is partially protective because it squelches acid production by parietal cells in the gastric pouch.

Smokers had a 41.5-fold greater risk of developing marginal ulceration

than did nonsmokers. Patients on NSAIDs had an 11.2-fold increased risk.

Neither alcohol intake nor patient demographics proved to be related to an increased risk of abnormal endoscopic findings.

Patients with a symptomatic marginal ulcer or stomal stenosis presented for endoscopy a mean of 2 months post surgery. Only 4 of 81

patients with a marginal ulcer presented after 12 months. In contrast, patients with staple line dehiscence presented a mean of 22 months after surgery.

There was a trend for nausea and vomiting to predict stomal stenosis at endoscopy. With that exception,

a patient's symptoms were not predictive of what would be found at endoscopy.

The incidence of marginal ulceration dropped off drastically by about 6-8 months, presumably because some sort of adaptation occurred. This may have involved the breakdown of ulcerogenic suture material and revascularization at the stomal site, he said.

"At our institution, if you have Roux-en-Y bypass surgery, you have about a 25% chance of being referred for endoscopy and, once scoped, about a 60% chance of our finding an abnormality directly related to the surgery," Dr. Wilson said.

Technical surgical factors, including choice of suture material, stomal tension, and orientation of the surgically created gastric pouch, are known to contribute to these complications, he said. ■

**The therapy may be partially protective because it squelches acid production by parietal cells in the gastric pouch.**

# Mortality After Bariatric Surgery May Exceed Previous Estimates

BY TIMOTHY F. KIRN  
Sacramento Bureau

SAN FRANCISCO — Bariatric surgery may carry a higher mortality risk than previously reported, according to a study of Medicare patients presented by Dr. David R. Flum at the annual clinical congress of the American College of Surgeons.

Previous reports have suggested that the mortality risk from gastric bypass procedures is only 1%-2%.

In the new study, Dr. Flum and colleagues looked at a Medicare database of 16,000 gastric bypass procedures performed between 1997 and 2002. Patients in the database were mostly female (75%), and the average age of the patients was 47 years, with 90% younger than 65 years. The investigators could not tell if the procedures were open or laparoscopic; however, most were presumed to have been open given the time period.

The analysis showed that the mortality rate was 2.0% at 30 days post procedure, 2.8% at 90 days, and 4.6% at 1 year, said Dr. Flum of the surgery department at the University of Washington, Seattle. Older patients and males had a higher risk of mortality than other patients, a fact that most surgeons who perform obesity procedures are well aware of, he added. The 30-day mortality rate was 3.7% for males versus 1.5% for females, and the mortality risk of patients 65 years or older was 3 times that of patients younger than 65, with a mortality rate of 44% at 1 year among those 75 years or older.

The researchers also calculated patient mortality for the individual surgeons who performed the procedures. That analysis showed a pattern of lower mortality with the surgeons who performed the highest number of Medicare

procedures, although it is not known from the data whether that pattern represents better technical skill or more restrictive patient selection by those experienced surgeons, Dr. Flum said.

Among the surgeons who performed the most procedures (more than 71 during the period studied), the 30-day mortality for patients older than 65 years (1.8%) was about the same as it was for younger patients (1.1%).

Dr. Flum noted that Medicare patients are either over 65 years of age or disabled, and therefore probably do not reflect the general population of patients who undergo bariatric surgery.

Moreover, the study does not indicate what the mortality would have been in this population had they not undergone surgery.

Still, the study provides important information, particularly now with the number of procedures continuing to grow, Dr. Flum said.

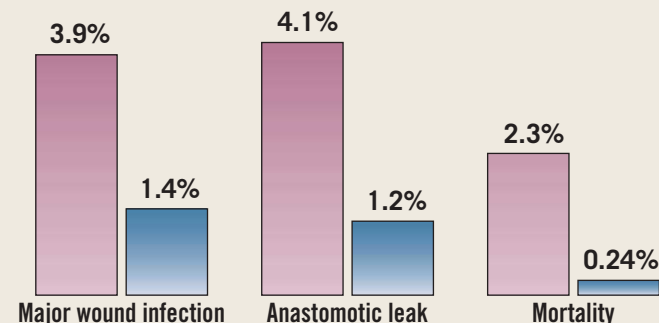
"Trying to make it look like bariatric surgery has zero deaths, which has been an approach used by many advocates for a decade, is problematic," he said. "This helps set the bar more realistically."

"If we don't use this data to help start an enlightened conversation about how to apply bariatric surgery, we're really missing a tremendous opportunity," he added. ■

## DATA WATCH

### Major Comorbidities Raise Risk of Bariatric Surgery Complications

■ BMI  $\geq 35$  kg/m<sup>2</sup> plus major comorbidities (n = 1,045)  
■ BMI  $\geq 40$  kg/m<sup>2</sup> minor/no comorbidities (n = 420)



Note: BMI is body mass index.  
Source: Surgery for Obesity and Related Diseases 2005;1:511-6

KEVIN FOLEY, RESEARCH/DESIGN

# Some Gastric Bypass Patients at Risk for Pulmonary Embolism

BY DAMIAN McNAMARA  
Miami Bureau

ORLANDO — Superobese males and patients with anastomotic leak have a four-fold increased risk of pulmonary embolism after gastric bypass surgery, according to a study presented at the annual meeting of the American Society for Bariatric Surgery.

Pulmonary embolism (PE) remains a leading cause of death following gastric bypass surgery, occurring with a 1% incidence in these patients (Arch. Surg. 2003;138:957-61). Extending prophylaxis after discharge, including the use of prophylactic inferior vena cava (IVC) filters, is gaining wide acceptance for high-risk pa-

tients, Dr. Fadi Abou-Nukta said.

Dr. Abou-Nukta and his associates studied 1,225 patients who had open Roux-en-Y gastric bypass at the Hospital of Saint Raphael in New Haven, Conn. All procedures were performed between 1998 and 2003. A total of 78% of these morbidly obese participants were female. Age and body mass index (BMI) for the morbidly obese group were compared with those of a randomly selected group of open gastric bypass patients.

The researchers diagnosed PE using computed tomography, ventilation-perfusion scanning, or autopsy. There were 11 patients with a PE, 6 male (2.3% incidence) and 5 female (0.5% incidence).

Prophylaxis consisted of heparin 5,000

IU, which was administered preoperatively, and intermittent use of pneumatic compression stockings in the operating room. Patients received enoxaparin (Lovenox) 40 mg, every 12 hours, until discharge, and early postoperative ambulation was encouraged.

Nine of the 11 patients developed a PE after discharge from the hospital, all within 30 days of undergoing gastric bypass surgery. The average BMI of 61 kg/m<sup>2</sup> in the PE group was higher than the BMIs of 52 in the control group. Patient age was not associated with an increased risk of the complication.

However, superobese males—those with a BMI of 50 or more—and those with an anastomotic leak had the greatest inci-

dence of PE (4% in each group).

Most of the 11 patients presented with multiple risk factors for PE, Dr. Abou-Nukta said. "Sixty percent of patients who experienced this complication had three or more risk factors." Risk factors include male gender, a BMI over 50, venous stasis disease, truncal obesity, sleep apnea, and immobility.

Patients are considered at high risk preoperatively if they have sepsis or two or more of these risk factors, Dr. Abou-Nukta said.

"For these patients, we extend the chemical prophylaxis to several weeks after discharge. Very high risk patients also get an [inferior vena cava] filter," he added. ■