

Internal Hernias Can Occur Long After Gastric Bypass

ARTICLES BY
DAMIAN McNAMARA
Miami Bureau

ORLANDO — Although internal hernias occur infrequently, they are a potentially serious complication that can develop long after gastric bypass surgery, according to a study presented by Brennan J. Carmody, M.D., at the annual meeting of the American Society for Bariatric Surgery.

"Internal hernia can be a devastating postoperative complication that leads to intestinal obstruction," he said. With an overall incidence of 2.5%, clinical suspicion for internal hernia needs to be high.

Consider internal hernia when a bariatric surgery patient presents with abdominal pain, even if more than a year has passed since the procedure was done, Dr. Carmody suggested. In his study, all 20 patients who required surgery to correct an internal hernia initially presented with abdominal pain. Nausea, vomiting, and bowel obstruction are other clinical clues.

Dr. Carmody and his associates reviewed 785 laparoscopic gastric bypass procedures performed between 1998 and 2003 at Virginia Commonwealth University Medical Center in Richmond. The mean preoperative body mass index was 47 kg/m², and BMI was a mean 31 at presentation. Mean patient age was 36 years. There were no deaths.

The researchers identified different

types of hernias, including Peterson's, mesocolic, jejunojejunal, and adhesion-related hernias. They used contrast radiography to assess 75% of patients. All findings were suspicious for internal hernia.

Surgical technique made a difference in the complication rate. In the first 107 patients, surgeons performed a retrocolic technique without defect closure. The internal hernia rate in this group was 6.5%. An antecolic technique was used with another 136 patients, and 4.4% developed a hernia. For the remaining 542 patients, surgeons performed a retrocolic technique with closure of all defects. Three developed an internal hernia, giving this group the lowest hernia rate—0.5%.

"We recommend routine closure of all mesenteric defects," Dr. Carmody said.

"Patients, primary care physicians, radiologists, surgeons, and physician assistants may fail to recognize signs or symptoms. Patients experiencing unexplained or intermittent abdominal pain should be considered for reexploration," said Dr. Carmody, a laparoscopy fellow with the Minimally Invasive Surgery Center at Virginia Commonwealth University.

There might be a reluctance to reexplore patients with vague symptomatology, Dr. Carmody said. But that is not the only challenge. A mean of 303 days elapsed between bypass and development of symptoms in his study. The patient with a late complication may not see the same bariatric surgeon who performed the procedure, he said. ■

Gallstone Prophylaxis Usually Is Unwarranted After Gastric Bypass

ORLANDO — Cholecystectomy or medication to prevent gallstones after gastric bypass surgery is unwarranted for most patients and expensive, according to results of a study presented by Joseph A. Caruana, M.D., at the annual meeting of the American Society for Bariatric Surgery.

Dr. Caruana and his associates studied 100 women and 25 men after open Roux-en-Y gastric bypass. None of the participants received ursodeoxycholic acid, a medication often used to prevent gallstones during rapid loss of weight. All procedures were performed at Sisters of Charity Hospital in Buffalo, N.Y., from June 2000 to July 2002. Participants did not have palpable gallstones at the time of surgery, and required at least 16 months of follow-up for inclusion in the study.

A total of 10 patients (8%) developed symptomatic gallstones that required cholecystectomy. Nine of these 10 women had laparoscopic cholecystectomy, and one had an open procedure. There were no serious complications from the gallstones or cholecystectomies, said Dr. Caruana, a laparoscopy fellow at Sisters of Charity.

"Prophylactic cholecystectomy would have been unnecessary in 115 patients,"

Dr. Caruana said. "The risk and cost of prophylactic cholecystectomy outweigh the benefits. Concomitant cholecystectomy is indicated only when stones are detected pre- or intraoperatively."

The incidence of symptomatic stones in the first two postoperative years was about 6% per year, Dr. Caruana said. "Most newly formed stones after gastric bypass are asymptomatic." He added that most patients with asymptomatic stones will remain asymptomatic during their lifetimes.

Many surgeons have proposed prevention with a cholecystectomy at the time of gastric bypass surgery (Obes. Surg. 2004;14:763-5). However, "most general surgeons would not remove the gallbladder during other procedures without the presence of stones," Dr. Caruana said.

Rapid weight loss after gastric bypass surgery can cause gallstones to form in up to 50% of patients, Dr. Caruana noted. For this reason, some experts recommend 6 months of ursodeoxycholic acid. A 6-month course of ursodeoxycholic acid for all 125 participants in the study would have cost \$56,250, he said. A better use of ursodeoxycholic acid might be for symptomatic patients who refuse surgery, he suggested. ■

Thromboembolic Risks After Roux-en-Y Bypass Identified

ORLANDO — Several factors predict an increased likelihood of deep vein thrombosis and/or pulmonary embolism for morbidly obese patients undergoing Roux-en-Y gastric bypass surgery, according to the results of a study presented by Rodrigo Gonzalez, M.D., at the annual meeting of the American Society for Bariatric Surgery.

Obesity is a major risk factor for perioperative deep vein thrombosis (DVT) and pulmonary embolism (PE). PE occurs in 2% of patients undergoing any surgical procedure, and it is responsible for 150,000 deaths in the United States each year, Dr. Gonzalez said. In bariatric surgery, the incidence of PE is estimated as 0.8%-4%, and the incidence of DVT as 0.6%-2%.

To identify the risk factors associated with these complications, the study looked at 660 consecutive patients undergoing Roux-en-Y gastric bypass. Prospectively collected data were reviewed by Dr. Gonzalez and his associates in the Interdisciplinary Obesity Treatment Group, department of surgery, University of South Florida, Tampa.

All patients received antithrombotic prophylaxis with heparin and sequential compression devices. Patients with a prior history of DVT, PE, or hypercoagulable diseases received inferior vena cava (IVC) filters; however, this practice was adopted only partway through the study, so some patients treated early did not receive the filters.

Postoperative low-molecular-weight heparin was dosed according to body mass in-

dex. Patients with a BMI less than 50 kg/m² received 40 mg once a day, those with a BMI from 50 to 59 received 30 mg twice a day, and those with a BMI greater than 60 received 30 mg twice a day for 2 weeks.

The researchers used Doppler ultrasound to diagnose DVT. PE was diagnosed on the basis of clinical, necropsy, and/or radiologic findings. The radiologic techniques included CT angiography and ventilation/perfusion scans. In patients with IVC filters, DVT was diagnosed using duplex ultrasound; these patients had mainly lower-extremity DVTs.

In all, 9 patients developed DVT, 6 developed PE, and 7 developed both DVT and PE, to give a total of 16 patients with DVT (2.5% incidence) and 13 with PE (2% incidence). These figures are consistent with values reported in the literature.

A multivariate analysis, comparing the group that developed DVT, PE, or both complications with patients who did not, showed that a significantly greater number were older than 50 years (50% vs. 29%) or had an anastomotic leak (32% vs. 3%), a history of smoking (23% vs. 7%), or a history of DVT and/or PE (23% vs. 7%).

An open surgical technique and revision operations also were more common in the group that developed DVT, PE, or both complications.

Additional screening is warranted in patients with one or more of these risk factors before Roux-en-Y gastric bypass, Dr. Gonzalez said. He added that supplementary postoperative prophylaxis might be warranted. ■



An open surgical technique and revision operations were linked to complications.

DR. GONZALEZ

Bariatric Surgery Mortality of 1.6% Higher Than Expected at 90 Days

ORLANDO — The risk of death from gastric bypass surgery continues beyond the immediate postoperative period, according to the results of a study reported by P. Jason Granet, M.D., at the annual meeting of the American Society for Bariatric Surgery.

"We are not out of the woods in the first 30 days. The main risk is pulmonary embolism, even after 90 days," Dr. Granet said in a poster presentation.

Dr. Granet and his associates retrospectively analyzed the records of 1,250 patients who had divided gastric bypass between 1979 and 2003. All the operations were performed by John R. Kirkpatrick, M.D., chair of the surgery department at Washington Hospital Center and lead author of the study.

Patients were managed with a standard protocol for 24 months that included prophylactic antibiotics, anticoagulants, and monthly follow-up visits. High-risk patients routinely received an inferior vena

cava (IVC) filter, he added. The researchers identified 44 anastomotic leaks during the 2-year study, said Dr. Granet, a general surgeon at Washington Hospital Center.

Seven deaths occurred in the immediate postoperative period, including two attributed to leak sepsis, three from pulmonary embolism (PE), one from wound sepsis, and one from respiratory failure.

Another six deaths occurred up to 30 days after surgery, including three from PE and three from sudden death syndrome.

"We had an extra eight deaths from 30 days to 90 days—more PE or suspected PE—and we were doing everything you can do [in terms of prophylaxis]," Dr. Granet said.

An additional five "late deaths" occurred between 90 days and 2 years.

If only the immediate postoperative period is considered, postoperative mortality is low, 0.5%. By 90 days, however, mortality is 1.6%, a "higher than expected" rate, Dr. Granet said. ■