Two-Stage Gastric Surgery Urged for Superobese

The first procedure can lead to sufficient short-term weight loss to reduce risk in the second operation.

BY SHARON WORCESTER
Southeast Bureau

HOLLYWOOD, FLA. — Consider performing a two-stage procedure in superobese patients undergoing weight loss surgery, Philip Schauer, M.D., advised at the annual meeting of the Society of American Gastrointestinal Endoscopic Surgeons.

"These patients [those with a body mass index over 60] can be enormously difficult to operate on," he said, explaining that challenges such as a thick abdominal wall, enlarged liver, and extensive comorbidities can extend operating time and greatly increase the risk of perioperative complications.

A two-stage procedure using a less technically difficult and less risky operation for the first stage can lead to sufficient short-term weight loss that reduces risk for the higher-risk, second-stage procedure such as gastric bypass, said Dr. Schauer, director of advanced laparoscopic and bariatric surgery at the Cleveland Clinic. For the first stage, he recommended vertical sleeve gastrectomy, which is an effective short-term weight loss procedure, or laparoscopic gastric banding. For the second stage, he recommended a Roux-en-Y gastric bypass procedure.

Weight loss after the initial procedure can reduce comorbidities and effectively downstage risk category.

Dr. Schauer reported on a series of 102 patients undergoing a two-stage weight loss procedure at the University of Pittsburgh. The patients' average age at the time of the first procedure was 50, and their BMI ranged up to 91. Each patient had an average of 10 comorbidities, and nearly half had a severe life-threatening disability. All had severe fatty liver disease.

Overall, 23 of the patients had completed the second stage as of February. Most underwent a sleeve gastrectomy followed by Roux-en-Y gastric bypass, Dr. Schauer reported.

After the first stage, average BMI dropped from 65 to the high 30s, and about 45% of excess weight was lost over 12 months. The weight loss had beneficial effects on patients and comorbidities, Dr. Schauer noted.

The rate of major complications in the first stage was 13%, which is "fairly minimal" for this very high-risk population, and the minor complication rate was 16%, he said.

All complications resolved without long-term disability. No deaths occurred.

More than half of the patients in the highest-risk category were downgraded by 1 or 2 categories, which represents a major difference in terms of operative risk at the time of the second procedure. The average number of comorbidities dropped from 10 to 6, and the vast majority of patients experienced major improvements in sleep apnea and diabetes.

Following the second-stage procedure, there were two major complications and three minor complications. None of these resulted in long-term morbidity.

The overall excess weight lost after the second stage was 60%.

The two-stage approach can transform a nonoperative candidate, who would otherwise be denied the most effective weight loss surgery, into a good candidate who has the potential to experience significant weight loss, Dr. Schauer said.

Other surgeons speaking on the topic of weight loss surgery for the superobese argued in favor of other procedures.

Emma Patterson, M.D., for example, said there are very few data on the use of sleeve gastrectomy in the two-stage procedure for the superobese, but several studies support laparoscopic gastric banding in this population.

Patients prefer gastric banding, she said, as it is more cost-effective and, according to some studies, is associated with a lower mortality (0.02% vs. 1%) and complication rate (3% vs. 10%) than gastric bypass.

At least one other study suggested that bypass surgery is less effective than gastric banding in the superobese, said Dr. Patterson, director of bariatric surgery at Oregon Health and Science University, Portland.

And Ninh T. Nguyen, M.D., argued that not all superobese patients are technically difficult to operate on, and a two-stage procedure might subject patients to an unnecessary second surgery. A Roux-en-Y bypass can be performed from the outset in carefully selected lower-risk patients, he said, noting that at least one study shows that this operation is feasible in the superobese.

Furthermore, data suggest that if you can't safely perform a laparoscopic Roux-en-Y bypass operation, then you probably can't safely perform a laparoscopic sleeve gastrectomy either, said Dr. Nguyen, chief of the division of gastrointestinal surgery, University of California Irvine Medical Center. In these patients, he recommends a staged Roux-en-Y procedure. ■

After Gastric Bypass Procedure, Bone Mineral Density Dips, Then Recovers

BY ALICIA AULT
Contributing Writer

CHICAGO — In one of the first studies to examine the long-term endocrine effects of gastric bypass surgery, it appears that after a loss in the first year post procedure, bone mineral density recovers in succeeding years, researchers reported at the annual meeting of the Society for Surgery of the Alimentary Tract.

Surgeons at Virginia Commonwealth University in Richmond prospectively collected data on 233 patients who were undergoing gastric bypass surgery. Of those, 82% had a Roux-en-Y procedure, 12% laparoscopically. The average age was 40 years, and the average body mass index was 50 kg/m^2, reported Jason Johnson, M.D., a fellow in the division of minimally invasive and advanced laparoscopic surgery at Virginia Commonwealth University, Richmond.

Dr. Johnson and his colleagues obtained preoperative bone mineral density (BMD) scans and found that most patients were normal at baseline, and remained at normal levels, even after surgery. Fifteen patients were osteopenic at baseline. Three developed osteopenia at 1 year post procedure. One patient with preoperative osteopenia actually had an increase in BMD after surgery.

At 1 year, for all patients, total forearm BMD decreased by 0.55%, and radius BMD increased by 1.85%. Total hip and lumbar spine BMD declined by 9.27% and 4.53%, respectively. These seem like fairly large decreases, but none of the patients developed osteoporosis during this period, Dr. Johnson said in an interview. The figures suggest a decline in the first year after gastric bypass, but the clinical significance of this is not yet known, he added.

At 2 years, forearm BMD decreased by 3.62%, but radius BMD remained steady. Both total hip and lumbar spine BMD recovered somewhat in the second year after bypass surgery, bringing them to almost the same levels as preoperatively.

At 3 and 4 years after surgery, BMD trended up, but there were too few patients at those time points to determine if the increases were statistically significant, Dr. Johnson said.

About 50%-60% of patients had calcium, parathyroid hormone, and vitamin D levels taken before surgery; all had those elements measured annually thereafter.

The mean serum calcium decreased from 9.8 mg/dL at baseline to 9.2 mg/dL in the first year, and to 8.8 mg/dL in the second year.

The parathyroid hormone level increased after surgery, which was not unexpected, Dr. Johnson said. It rose from 59.7 pg/mL preoperatively to 63.1 pg/mL in the first year, and to 64.7 pg/mL in the second year.

Vitamin D did not show any significant difference from preoperative level to 2 years, though it trended up. All the patients were given vitamin D postoperatively as part of a multivitamin supplement.

Dr. Johnson told attendees that at Virginia Commonwealth University, physicians recommend giving patients 1-1.5 grams of vitamin C and 400 IU of vitamin D daily, and monitoring them for BMD, calcium, parathyroid hormone, and vitamin D on an annual basis.

Although the study backed other reports showing an initial decline in BMD, the clinical significance is unclear, Dr. Johnson said. "We have shown it's not an ongoing process," he added. ■

'Failed' Gastric Banding Often Can Be Salvaged by Correcting Hernias and Crural Defects

HOLLYWOOD, FLA. — Undiagnosed hiatal hernias or large hiatal crural defects account for many failed laparoscopic adjustable gastric banding procedures, and correcting these defects can obviate the need for band removal, George A. Fielding, M.B., reported at the annual meeting of the Society of American Gastrointestinal Endoscopic Surgeons.

In one series of 2,450 patients who underwent laparoscopic adjustable gastric banding (LAGB), 5% had symptomatic failure. Most of these failures were a result of reflux or dysphagia, and many of the patients were found to have a hiatal hernia or large hiatal crural defect, Dr. Fielding wrote in a "poster of distinction" presented at the meeting.

Such patients are now offered repair of the hernia or crural defect. Of those who presented with severe reflux at a mean of 44 months following LAGB, all were on proton pump inhibitor therapy, nine were considering band removal, four had severe dysphagia, nine had hiatal hernia/concentric dilatation, and six had slipped bands. At an average of 15 visits, the mean band fill was only 1 cc; nine of the patients had empty bands.

Twenty-three patients underwent repairs: 13 had crural defect repair alone, the 4 with severe dysphagia also had a change to an 11-cm band, and the 6 with slipped bands also had repair of the slips, wrote Dr. Fielding of New York University Medical Center, New York.

At a mean follow-up of 13 months, patients had a mean of four postoperative visits and a mean band fill of 2 cc in the standard bands. All patients no longer took proton pump inhibitors and were asymptomatic and satisfied with the bands.

In the 14 months since symptomatic patients have been offered defect repair as an alternative to band removal, no bands have been removed, compared with removal of a mean of 10 per year in previous years, Dr. Fielding reported.

The repair of hiatal hernias and large hiatal crural defects will cure reflux symptoms and greatly reduce the need for band removal in LAGB patients with persistent reflux symptoms, allowing band tightening to be performed as appropriate, Dr. Fielding concluded.

—Sharon Worcester