

— FROM THE AMERICAN SOCIETY FOR METABOLIC AND BARIATRIC SURGERY —

Bariatric Surgery Benefits Both Young and Old

BY BRUCE JANCIN

GRAPEVINE, TEX. — Many surgeons are reluctant to perform weight-loss operations in morbidly obese seniors because of concerns that they're at high risk for perioperative morbidity and mortality. But a large new study suggests that's a misperception.

"We found that weight-loss surgery is equally safe and effective in patients over the age of 65 and in younger patients," Dr. Christopher M. Willkomm reported at the annual meeting of the American Society for Metabolic and Bariatric Surgery.

Dr. Willkomm, a general surgery resident at Baylor University Medical Center, Dallas, reported on 1,474 consecutive patients who underwent laparoscopic Roux-en-Y gastric bypass at Baylor during 2005-2008, of whom 100 were aged 65 years or older. The mean age of the seniors was 68, while mean age of the under-65 group was 43 years. Body mass index in the seniors averaged 45 kg/m², compared with 47 kg/m² in those under age 65.

All of the patients over age 65 had a preoperative cardiac stress test, bilateral lower-extremity ultrasound, upper GI endoscopy, and pulmonary function tests.

The seniors had a higher operative risk profile. Their 65% prevalence of diabetes was twice that of younger patients, and they had significantly higher rates of hypertension and sleep apnea. Yet their 30-day mortality rate was zero, compared with a 0.14% mortality rate in the younger group. The 30-day readmission rate was 6.0% in the seniors and 7.4% in

those under age 65. Operative time in the seniors averaged just 5 minutes more than the 65 minutes in younger patients. Hospital length of stay averaged 2.0 days in the seniors and 1.3 days in younger patients.

Postoperative complication rates were similarly low in both groups. The seniors had a 1% incidence of



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bleeding requiring transfusion, compared with 1.3% in younger patients, and a 1% rate of wound infections requiring incision and drainage compared with 1.7%, respectively. Similarly, seniors had a 2% incidence of atrial fibrillation, compared with a 0.36% rate of cardiac complications in younger patients, and a 3% incidence of pulmonary complications, compared with 1.3% in younger patients.

At 2 years' follow-up, the seniors had lost an average of 83% of their excess body weight, compared with 78% in the younger group.

Diabetes remission occurred in 63% of the diabetic seniors, who were all off diabetic medications at 1 year of follow-up, as were 69% of diabetic patients under age 65. Of the patients with preoperative hypertension, 23% of seniors were off all antihypertensive medications at follow-up, as were 45% of younger hypertensive patients. ■

Risk-Reduction Program Before Surgery May Improve Survival

BY BRUCE JANCIN

GRAPEVINE, TEX. — Preoperative application of the Obesity Surgery Mortality Risk Score to identify the highest-risk bariatric surgery candidates and refer them to medical specialists for aggressive risk reduction may improve surgical outcomes, according to results from a new series of 105 consecutive patients.

Historically, bariatric surgery patients in Obesity Surgery Mortality Risk Score (OS-MRS) Class C have had 90-day mortality rates of 2.4%-7.6% in published studies. However, in this series of patients, whose OS-MRS Class C status guided preoperative interventions aimed at getting them into optimal shape for surgery, there was zero 90-day mortality, Dr. Rebecca P. Petersen reported at the annual meeting of the American Society for Metabolic and Bariatric Surgery.

The OS-MRS, developed several years ago to stratify mortality risk in bariatric surgery patients, is a simple scoring method that identifies three risk classes based on five risk factors: a body mass index of 50 kg/m² or more, male gender, age 45 years or older, hypertension, and the presence of pulmonary embolus risk factors including right heart failure or prior venous thromboembolism. One point is awarded for each risk factor. Class C patients have an OS-MRS of 4 or 5 (Surg. Obes. Relat. Dis. 2007;3:134-40).

Several previous independent studies have validated the OS-MRS as a predictive tool. Dr. Petersen presented the first study in which the score was used to guide preoperative risk-reduction interventions and thereby favorably influence surgical outcome.

The 105 OS-MRS Class C patients were

identified among a consecutive series of 1,706 patients undergoing bariatric surgery in 2005-2008. The Class C patients were liberally referred to cardiologists, endocrinologists, primary care physicians, pulmonologists, and hematologists for preoperative risk reduction. For example, the goal requested of endocrinologists in referred patients with poorly controlled diabetes was to get their preoperative glycosylated hemoglobin below 8.0%.

All patients were urged by their surgeon to lose more than 10 pounds prior to surgery, a goal achieved by 25% of them, added Dr. Petersen of Duke University, Durham, N.C.

Ninety percent of the Class C patients underwent laparoscopic Roux-en-Y gastric bypass, the bariatric procedure of choice at

In a series of patients who underwent risk-reduction intervention, there was zero 90-day mortality.

DR. PETERSEN

Duke. Nine patients for whom this operation wasn't safe or technically feasible underwent laparoscopic adjustable gastric banding, and one had a gastric sleeve procedure.

The most common surgical complication, anastomotic leak, occurred in 6 of 95 gastric bypass patients. Venous thromboembolism occurred in four patients. In addition to the zero 90-day mortality, there were no myocardial infarctions.

At 1-year follow-up, patients had lost an average of 50% of their excess weight.

Dr. Petersen said that advances in laparoscopic bariatric surgery could have contributed to the favorable study findings, adding that a larger prospective multicenter study is needed to confirm the value of the OS-MRS as a tool for improving surgical outcomes.

She reported having no conflicts of interest in connection with her study. ■



Long-Term Remission Achieved

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in those with diabetes for more than 7 years.

Mean fasting blood glucose in the overall study population was 146 mg/dL preoperatively and 118.5 mg/dL at 5 years. Mean HbA_{1c} was 7.5% before LAGB and 6.6% after 5 years.

In a separate presentation, Dr. Silas M. Chikunguwo reported on 177 type 2 diabetes patients who underwent open or laparoscopic gastric bypass for morbid obesity and were followed for a mean of 8.6 years and up to 16 years. Their mean BMI went from 50 to 31 kg/m².

Postoperatively, 89% of patients had complete remission of their diabetes. The remission proved durable in 57%, said Dr. Chikunguwo of Virginia Commonwealth University, Richmond.

Factors associated with durable re-

missions included limb bypass length greater than 100 cm, male sex, younger age, greater mean percent excess weight loss, and less weight regain.

Another predictor of durable remission was less severe preoperative diabetes: The recurrence rate was 72% in patients on preoperative insulin, 34% in those on oral agents, and 24% in those on dietary control alone.

The studies presented by Dr. Chikunguwo and Mr. Sultan are among the largest and longest follow-ups to date examining bariatric surgery's impact on diabetes. The increase in recurrences over time noted in Dr. Chikunguwo's study is consistent with the results of a landmark recent systematic review and meta-analysis led by Dr. Henry Buchwald, professor of surgery and biomedical engi-

neering at the University of Minnesota, Minneapolis.

The meta-analysis included 621 published studies in more than 135,000 morbidly obese patients, 22% of them with type 2 diabetes, who underwent various forms of bariatric surgery. Eighty-two percent of the diabetics ex-



Long limb bypass length, male sex, and greater percent weight loss were predictors of durable remission.

DR. CHIKUNGUWO

perienced complete resolution of the clinical and laboratory manifestations of diabetes in the first 2 years post surgery, dropping off to a 62% resolution rate after 2 years.

The diabetes remission rates ranged from a high of 95% for patients undergoing biliopancreatic diversion/duodenal switch, to 80% for gastric bypass, 80% for gastropasty, and 57% for LAGB. Those resolution rates paralleled weight loss, which was greatest in recipients of biliopancreatic diversion/duodenal switch and least with LAGB (Am. J. Med. 2009;122:248-56.e5)

But weight loss can't be the whole explanation for postsurgical remission of diabetes. It's likely that surgically induced changes in the gut hormonal milieu are involved. As Dr. Buchwald noted, diabetes can go into remission within days after bariatric surgery, before major weight loss has occurred.

Dr. Chikunguwo and Mr. Sultan reported having no conflicts of interest, although Mr. Sultan noted that his coinvestigators serve as consultants to Allergan, which markets the LAP-BAND system. ■