

Gastric Bypass Cuts Left Atrial Size, Heart Failure

BY MITCHEL L. ZOLER
Philadelphia Bureau

NEW ORLEANS — Good outcomes from bariatric surgery in morbidly obese patients continue to accumulate.

In a series of 12 patients with severe systolic heart failure at one center, bariatric surgery was safe and led to improved left ventricular function, Dr. Gautam V. Ramani said at the annual meeting of the American College of Cardiology. An independent report showed that gastric bypass surgery led to a significant reduction in left atrial size in a randomized, prospective study with 409 patients, Dr. Sheldon E. Litwin reported in a poster at the meeting.

"Left atrial volume is a powerful, long-term prognostic factor for survival; it's considered the hemoglobin A_{1c} of the heart," Dr. Litwin said in an interview.

"Our findings suggest that gastric bypass surgery may lead to improved cardiovascular outcomes. So far, no one has proven that gastric bypass surgery leads to fewer deaths, but we think that reduced left atrial volume is a harbinger of a mortality effect."

Another significant aspect of this study was that it's the largest prospective study

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reported to date of bariatric surgery for morbid obesity, said Dr. Litwin, professor of medicine and director of non-invasive imaging at the University of Utah, Salt Lake City.

His study enrolled patients with a body mass index (BMI) of more than 40 kg/m², or more than 35 if they also had secondary complications from obesity. About 85% of the patients were women, and their average BMI was about 45.

The patients were randomized to either gastric bypass with Roux-en-Y surgery or no surgery. Follow-up after 2 years showed that patients who had surgery lost an average of 96 pounds and had an average drop in BMI of 15.5. There was no significant change in weight or BMI in the patients who did not have surgery.

At baseline, the average left atrial size in all patients was about 57 mL, measured by echocardiography. Two years after surgery, left atrial volume fell by an average of 2.5 mL in the surgery patients and increased by an average of 4 mL in control patients.

The second study reviewed 12 patients with severe systolic heart failure who underwent bariatric surgery at the University of Pittsburgh during 2001-2006. Their average BMI was 53, and their average age was 41 years.

All of the patients had a left ventricular ejection fraction of less than 45%, with an average ejection fraction of 22%.

Three patients had New York Heart Association class II heart failure, seven patients had class III heart failure, and two patients had class IV heart failure.

Eight patients had laparoscopic Roux-en-Y surgery, two had a gastric sleeve placed laparoscopically, one had gastric banding placed laparoscopically, and one underwent gastric bypass by open surgery (after initial laparoscopic surgery wasn't successfully completed).

The average postoperative length of

hospitalization was 3 days. By 1 month after surgery, the only complications were pulmonary edema in one patient and acute renal failure in another, but both conditions resolved after 1 month.

At 1 year after surgery, the average BMI was 40 and the average left ventricular ejection fraction was 35%, a statistically significant improvement over baseline. At follow-up, nine patients had class II heart failure, and three had class III.

"Despite the small study size and ret-

rospective data, bariatric surgery was safe in patients with severe, systolic heart failure," said Dr. Ramani, a cardiologist at the University of Pittsburgh. "Bariatric surgery should be offered to obese patients with heart failure before they develop end-organ dysfunction and renal failure."

Bariatric surgery should also be considered for morbidly obese patients who would otherwise be candidates for heart transplantation, he added. ■

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