Cost-Effectiveness of Bariatric Surgery Assessed

BY DOUG BRUNK

NEW ORLEANS — Although not cost-saving, bariatric surgery appears to be a good value for the money, the results from a large single-center study showed.

"The long-term cost-effectiveness of bariatric surgery will largely depend on the natural history and extent of late postsurgical complications and costs," Dr. William H. Herman said at the annual scientific sessions of the American Diabetes Association.

To gain a better understanding of the cost-effectiveness of bariatric surgery in a managed care population, Dr. Herman and his associates studied 221 patients who underwent Roux-en-Y procedures in a Southeastern Michigan HMO between May 1, 2001, and June 30, 2005. Patients were asked to complete the EQ-5D, a standardized tool used to measure health-related quality of life before, and 1 year after, bariatric surgery.

The patients' mean age was 42 years, 88% were female, and the mean body mass index before surgery was 52 kg/m^2, reported Dr. Herman, director of the Michigan Diabetes Research and Training Center at the University of Michigan, Ann Arbor. At baseline, 49% had hypertension, 36% had diabetes, and 49% had obstructive sleep apnea.

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DR. HERMAN

Nearly two-thirds of the patients (64%) had open surgical procedures. The remainder had laparoscopic procedures.

One year after surgery, the mean BMI fell from 51 kg/m^2 to 31 kg/m^2 in women and from 59 kg/m^2 to 35 kg/m^2 in men.

Overall, patients dropped from a mean weight of 320 pounds to a mean of 192 pounds, a loss of nearly 130 pounds in each person. The average BMI fell from 52 kg/m^2 to 31 kg/m^2, excess weight fell from 191 pounds to 64 pounds, and patients reported that their comorbidities were improved.

For example, 98% reported improvements in hypertension, 100% reported improvements in diabetes, and 92% reported improvements in obstructive sleep apnea.

Total per-member costs were about $600 per month in the 6 months prior to surgery, dropped to about $400 per month in the 12 months after surgery, then rose to about $600 per month 1 year after surgery.

"In the 6 months before bariatric surgery, there was some ramp-up in outpatient pharmacy costs and, not unexpectedly, an increase in clinic costs and diagnostic and laboratory testing likely related to the preoperative period," Dr. Herman said.

"Following bariatric surgery there was a dramatic reduction in outpatient pharmacy costs but some increase in inpatient costs, which seemed to increase the year following surgery," he added.

The surgery itself cost about $12,000, with a slightly lower cost for the laparoscopic procedure.

When the researchers prospectively assessed presurgical quality of life, they found that the average health utility scores improved by 0.14 1 year after surgery.

In analyses that took a lifetime time horizon, adopted a payer perspective, and discounted costs and health utilities at 3% per year, the cost-utility ratio for bariatric surgery was about $15,000 per quality-adjusted life year gained.

Dr. Herman also reported that bariatric surgery was more cost effective in older patients, more obese patients, and nondiabetic patients, and when performed laparoscopically.

Dr. Herman disclosed that he serves as an adviser to Johnson & Johnson and Sanofi-Aventis, and as a consultant to Amylin Pharmaceuticals Inc. ■

High Bariatric Surgeon Volume Predicts Low Adverse Event Rate

GRAPEVINE, TEX. — Even for experienced bariatric surgeons operating at recognized centers of excellence, the adverse event rate for Roux-en-Y gastric bypass declines by 10% for every additional 10 cases performed annually.

In a large national study, the inverse relationship between surgeon volume and adverse events was continuous. There was no suggestion of any specific volume cut-point that defined a surgeon as an expert, Dr. Mark D. Smith said at the annual meeting of the American Society for Metabolic and Bariatric Surgery.

Dr. Smith, a bariatric surgeon in Portland, Ore., reported on 3,409 patients who underwent an initial Roux-en-Y gastric bypass with 31 surgeons at 10 centers of excellence participating in the National Institute of Diabetes and Digestive and Kidney Diseases–sponsored, prospective Longitudinal Assessment of Bariatric Surgery-1 (LABS-1) study.

Of the 31 surgeons, 15 averaged fewer than 50 of the procedures per year, 9 performed 50-99 annually, and 7 did 100 or more. Both national bariatric surgery centers of excellence programs require that surgeons perform a minimum of 50 cases per year for accreditation.

The primary, composite 30-day adverse event end point comprised death, venous thromboembolism, reintervention, or hospitalization for the full 30 days. It occurred in 4.0% of patients whose surgeons performed at least 50 Roux-en-Y gastric bypasses annually and 9.1% of patients of lesser-volume surgeons. After adjustment for patients' operative risk, the relative risk of adverse events was 2.2-fold greater with surgeons who averaged fewer than 50 cases per year than with those who did more.

After more detailed analysis, it was apparent that the inverse relationship between surgeon volume and adverse outcomes was continuous, and that for every 10 cases performed annually, the risk of adverse events decreased by 10%. The effect of surgeon volume was greater in higher-risk patients, Dr. Smith said.

—Bruce Jancin