

Weigh Surgical Options for Metabolic Syndrome

BY ALICIA AULT

FROM THE ANNUAL MEETING OF THE SOUTHERN SURGICAL ASSOCIATION

HOT SPRINGS, VA. – An analysis of a large database of bariatric surgery patients has found that those with metabolic syndrome had dramatic improvements in comorbidities but a slightly higher rate of adverse events after 90 days.

Overall, patients with metabolic syndrome tend to be sicker and to have a greater incidence of adverse outcomes and higher mortality than do obese patients who don't have the syndrome, said Dr. William B. Inabnet III, professor of surgery at Mount Sinai School of Medicine in New York.

He and his colleagues at Mount Sinai also determined that the reduction in weight was procedure dependent. "A careful assessment of risk-benefit ratio is warranted to develop the optimal clinical pathway for treating these patients," said Dr. Inabnet at the meeting.

The researchers examined BOLD (Bariatric Outcomes Longitudinal Database) to identify patients who had undergone bariatric surgery from June 2007 to November 2010 and had metabolic syndrome.

BOLD is maintained by the American Society for Metabolic and Bariatric Surgery (ASMBS) Bariatric Surgery Center of Excellence program, and includes 1,157 surgeons at 884 hospitals. The data are self-reported, but some data are verified by on-site inspections. The surgical interventions covered in the registry include gastric banding, Roux-en-Y gastric bypass, sleeve gastrectomy, and biliopancreatic diversion with duodenal switch.

A modified scoring system (0-5) was used to assess comorbidities. For the purposes of the study, metabolic syndrome was defined as a hypertension score greater than 3, a diabetes score greater than 2, a dyslipidemia score greater than 2, and a sleep apnea score greater than 3. (Sleep apnea is not usually included in the definition of metabolic syndrome, but the researchers were interested in the condition as a comorbidity, said Dr. Inabnet.)



Roux-en-Y has the best risk profile, but sleeve gastrectomy may prove to be a good choice.

DR. INABNET

Mortality rates differed by procedure, however. The gastric band patients had the lowest rate (0.1%), followed by 1.2% for duodenal switch, 0.3% for sleeve gastrectomy, and 0.4% for gastric bypass. The serious complications, readmissions, and reoperations at 90 days were also lowest for gastric band patients, followed by duodenal switch, sleeve gastrectomy, and gastric bypass patients.

Metabolic syndrome was associated with the greatest risk for serious complications, according to the authors' regression model. Those who received the gastric band had a 2.79-fold increase in risk at 90 days, compared with bypass patients, who had a 1.34-fold increased risk.

Follow-up data at 1 year were available for a little more than half of those with metabolic syndrome (12,144 patients). The data show that the decrease in BMI was procedure dependent. The greatest decrease in mean BMI (from 51 to 32) was seen in those who had a biliopancreatic diversion. Mean BMI dropped from 46 to 39 in gastric band patients, from 49 to 36 in those

who had a sleeve gastrectomy, and from 48 to 32 in those who had the bypass.

Reduction of comorbidities was also greatest in the duodenal switch group, followed by the bypass, sleeve, and gastric band procedures. For instance, diabetes resolved in 74% of patients who had the duodenal switch, compared with only 28% of those who received the band. There were big reductions in hyperlipidemia and sleep apnea for all the procedures.

The data are limited in that they are self-reported, noted Dr. Inabnet. Even so, the "study confirms the previously held hypothesis that metabolic syndrome confers increased morbidity," said Dr. Bruce Schirmer, vice-chair of the department of surgery at the University of Virginia, Charlottesville. In discussing the paper, Dr. Schirmer noted that BOLD also seemed to show lower overall weight loss and resolution of comorbidities than was previously reported by individual institutions.

The database, however, has its advantages, said another discussant, Dr. William O. Richards, chair of the department of surgery and director of the surgical weight loss center at the University of South Alabama, Mobile. "This paper is important because it's another one of the studies emanating from prospective [collections of data across the United States] from hundreds of surgeons, and convinces me we are ever more confident in reporting results not just from a single surgeon but from actual practice," said Dr. Richards.

He questioned whether the low mortality rate was a reflection of surgeons' opting to avoid procedures in high-risk, older obese patients, or whether it was a reflection of the success of the centers of excellence system.

Dr. Inabnet said that there were 200 patients older than age 75, and although the data are currently too young to allow the measurement of any trends, it does not seem that older patients are being operated on less often than are younger patients.

"What is the best operation? That really is the million dollar question," he said. The data show that the Roux-en-Y procedure provides the best overall risk profile, but he added that the sleeve gastrectomy is increasing in prevalence and may eventually prove to be a good choice.

Dr. Inabnet, Dr. Schirmer, and Dr. Richards reported no conflicts. ■

Iron Deficiency 'Unintended Consequence' of Gastric Bypass

BY DOUG BRUNK

FROM THE ANNUAL MEETING OF THE AMERICAN SOCIETY OF HEMATOLOGY

SAN DIEGO – About one-quarter of patients referred to a group hematology practice had iron deficiency associated with gastric bypass surgery, a study has shown.

In addition, 57% demonstrated symptoms of pica syndrome – a craving for and compulsive eating of nonfood substances such as ice and starch.

"As morbid obesity has become a large problem in this country and more and more people are undergoing gastric bypass surgery, iron deficiency anemia is an unintended consequence," Dr. Thomas A. Bensinger said at the meeting. "Some of these patients get very severely anemic."

Dr. Bensinger and his associates at a group practice in Greenbelt reviewed the medical records of 300 adults re-

ferred to the practice between March and November of 2010 with a diagnosis of anemia.

Of the total, 130 demonstrated iron deficiency anemia after undergoing laboratory studies that included a complete blood count, a ferritin level, an iron/total iron-binding capacity, a reticulocyte count, and a review of the peripheral blood film.

Of the 130 patients, 122 (94%) were women, 4 of whom were pregnant. Heavy menstrual bleeding was the most common cause of iron deficiency anemia (62%), followed by gastric bypass surgery (24%), gastrointestinal abnormalities (6%), and heavy menstrual bleeding associated with the presence of uterine fibroid (5%). In addition, 12% of patients had heavy menstrual bleeding and had undergone gastric bypass surgery. The remaining 3% of patients were male.

More than half of the patients (57%)

demonstrated symptoms of pica syndrome, primarily the urge to eat ice. Two patients reported an urge to eat toilet paper while one patient reported eating leaves that were stripped from a plant



It is important to pay attention to key indicators of iron deficiency anemia, including various forms of pica syndrome.

DR. BENSINGER

in her garden. Such symptoms "were often not reported by the patient unless the patient was questioned in detail, with the exception of a small subset of patients who had performed an Internet search and found pica for ice to be associated with iron deficiency anemia," Dr. Bensinger said.

Pica syndrome symptoms typically resolved within 7-21 days of intravenous iron administration. "I speculate that the craving for ice is related to enzymes that are in the oral cavity in the mucosa," he said.

"They get iron depleted and somehow the ice makes them feel better. When you give them the iron, those enzymes get repleted. It's a very interesting phenomenon. Some of our patients know when they start to get iron deficient again, because they realize they're eating ice."

The study's overall findings underscore the importance of paying close attention to key indicators of iron deficiency anemia, including low mean corpuscular volume and various forms of pica syndrome.

"You have to keep paying attention to the causes of anemia," he said.

Dr. Bensinger reported having no relevant financial disclosures. ■