Gastric Banding Improves Weight, QOL in Teens

The study provides more level 1 evidence that bariatric surgery trumps nonsurgical treatment.

BY MARY ANN MOON

Gastric banding allowed extremely obese adolescents to achieve a more substantial and durable weight loss than did an intensive lifestyle modification program, based on results of a prospective clinical trial with 50 adolescents.

The bariatric procedure improved overall health better than the lifestyle intervention did, resolving all cases of metabolic syndrome and insulin resistance. It also improved the adolescents’ quality of life to a greater degree, according to the findings of a randomized controlled trial.

Dr. Paul W. O’Brien of the Centre for Obesity Research and Education at Monash University, Melbourne, and his colleagues compared the two approaches in adolescents aged 14-18 years with a body mass index of greater than 35. All study subjects had related medical complications, including hypertension, metabolic syndrome, asthma, and back pain, as well as physical limitations such as the inability to play sports and problems performing activities of daily living.

They also reported psychosocial problems including isolation, low self-esteem, and victimization by bullies.

The subjects were randomly assigned to undergo laparoscopic adjustable gastric binding with follow-up education and guidance or to participate in an intensive nonsurgical intervention program.

The program focused on reduced energy intake (800-2,000 kcal per day, depending on age and weight); increased physical activity (more than 10,000 steps/day as measured by pedometer), which included structured exercise for at least 30 minutes per day; and behavior modification. The subjects were advised to limit time spent on sedentary pursuits such as computer or television to 2 hours per day, and to participate in bike rides, hiking trips, kickboxing events, and bowling parties with other patients. They received 6 weeks of instruction from a personal trainer and met with a physician, a dietitian, or an exercise consultant every 6 weeks.

Twenty-four of the 25 subjects in the surgery group (96%) completed the full 2 years of follow-up, compared with 18 of the 25 in the lifestyle group (72%).

Twenty-one subjects in the surgery group (84%) but only three subjects in the lifestyle group (12%) achieved the primary outcome measure of a loss of at least 50% of excess weight.

At 2 years, surgery group subjects had lost a mean of 35 kg, which represents a mean loss of 28% of total body weight. In comparison, subjects in the lifestyle group lost a mean of 3 kg, which represents a mean loss of 3% of total body weight, according to Dr. O’Brien and his colleagues (JAMA 2010;303:519-26).

At the inception of the study, 9 subjects in the surgery group and 10 in the lifestyle group had metabolic syndrome.

By the end of the study, this had resolved in all surgery subjects and in six of the lifestyle subjects.

Similarly, insulin resistance was abnormally high in more than half of the subjects at baseline. The problem resolved in all subjects in the surgery group but persisted in three subjects in the lifestyle group.

Those who underwent gastric banding also showed significant improvements in quality of life in the domains of physical functioning, general health, self-esteem, and family activities, whereas those who participated in the nonsurgical intervention did not.

There were no operative or postoperative events, “the investigators stated.

However, compared with adults, adolescents may have more difficulty understanding and complying with instructions to eat only small meals and to eat very slowly in order to avoid the need for revisional procedures. Therefore, additional education and supervision of eating may be helpful for this age group, they added.

In an editorial comment accompanying the article, Dr. Edward H. Livingston of the University of Texas Southwestern Medical Center, Dallas, said that the study provides another randomized controlled trial comparing bariatric surgery with nonsurgical treatments, culminating in more level 1 evidence. This is crucial because the quality of the current evidence in support of bariatric surgery is “poor,” he said (JAMA 2010;303:559-60).

Dr. Livingston added that the 28% rate of revisional procedures in this study is particularly important “because O’Brien et al. are among the most experienced group in the world with these operations, suggesting that these complication rates will probably be higher in actual community practice.”

This study was supported in part by Allergan Inc., which provided the gastric bands. Dr. O’Brien reported no potential conflicts of interest, but one of his associates is a consultant for Allergan, Bariatric Advantage, Scientific In-take Ltd., SP Health Co., Optifast, Abbott Australasia, Eli Lilly Australia, Merck Sharp & Dohme Australia, Nestlé Australia, and Roche Products Australia. Dr. Livingston reported no potential conflicts of interest.

Childhood Obesity, HT Linked to Early Adult Mortality

BY MARY ANN MOON

Obesity, hypertension, and glucose intolerance in childhood are strongly associated with premature death from endogenous causes, according to an analysis of data from a longitudinal study.

Failure to reverse the current population trends in childhood obesity thus could have far-reaching consequences for longevity, said Paul W. Franks, Ph.D., of the National Institute of Diabetes and Digestive and Kidney Diseases, Phoenix, and his associates.

The investigators noted that “little is known about the way in which cardiovascular risk factors that are present during childhood affect the life span,” and “the need for a revisional procedure is intrinsic to the gastric banding procedure, the Swedish Research Council, the Swedish Heart Lung Foundation, the Swedish Research Council, Umeå University, and Västerbotten regional health authority.”