San Francisco — Few morbidly obese adolescents show good compliance after bariatric surgery.

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An N F R A N C I S C O — Few morbidly obese adolescents show good compliance after bariatric surgery.

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San Francisco — Few morbidly obese adolescents are referred for bariatric surgery, despite the high rate of failure with conservative interventions. But short-term outcomes and compliance in teens undergoing Roux-en-Y gastric bypass, laparoscopic adjustable gastric banding, or bilipancreatic diversion are as good as those of older patients, according to findings from a series of small retrospective studies presented at the annual meeting of the American Society for Bariatric Surgery.

Those who object to doing bariatric surgery in adolescents question "whether teenagers will comply with the treatment regimen," said Dr. George A. Fielding of the surgical weight loss program at New York University, New York. “It’s been pos- tulated that kids won’t do this just by the nature of being a teenager.”

While in Dr. Fielding’s care at the NYU Medical Center, 81 adolescents have received laparoscopic adjustable gastric banding (LAGB). Five of the patients were aged 12-13 years, 55 were aged 14-17 years, and 21 were aged 18-19 years. Most (60) were girls and weighed an average of 137 kg with a mean body mass index (BMI) of 48 kg/m². After 1 year of follow-up in 32 patients, the patients lost 57% of their excess weight on average and had a mean BMI of 34. All complained of nausea, except for two patients who needed to maintain anti-depressant therapy.

Band adjustments at follow-up visits is a “key issue to the management of all LAGB patients, and it’s no different with children,” Dr. Fielding pointed out. During the first year of follow-up in 27 patients aged 14-17 years, an average of 6.5 banding adjustments were made during 10 visits. This led to an average of 64% excess weight lost; only 2 of these 27 patients lost less than 50% of their excess weight, Dr. Fielding said.

Most patients reported that they were much less hungry and were eating a sub- stantly smaller volume of food than they had been preoperatively. Very few had a desire to binge eat, he said. The decision to undergo LAGB had been made mostly by the adolescents rather than by their parents, Dr. Fielding said.

When performing LAGB in adolescents in Australia and in New York, he has taken a hands-off approach. “If you tell teenagers they can do pretty much what they like, they’ll tear back in shock and usually do what you ask them to,” he said.

In a separate report, Dr. Jose S. Pinheiro of the Hospital São Camilo, São Paulo, Brazil, reviewed his center’s experience in performing laparoscopic Roux-en-Y gastric bypass surgery in 49 adolescents with a mean age of 16 years. The patients, 35 of whom were male, all received pre opera-tive psychiatric evaluations and had full parental support.

The laparoscopic RYGBs involved an antecolic, antegastric approach and used a 50-cm biliary limb and a 250-cm alimentary limb. No patients died or had com-plications during surgery, and their average hospital stay was 30 hours.

The patients’ mean BMI dropped from 45 before surgery to 23.5 at a mean follow-up of 48 months. All obesity-related co-morbidities resolved after surgery.

Dr. Pinheiro and his colleagues are still collecting quality of life data, but he said that all of the patients are happy with the surgery and are committed to becoming healthier. “The patients were extremely compliant with treatments,” Dr. Pinheiro said, noting that all of them exercised on a regular basis. “Gastric bypass should be offered as an option in the treatment of obese adolescents,” he added.

When adolescents are referred for bariatric surgery, they are usually offered a restrictive procedure, said Dr. Francesco S. Papadia of the department of surgery at the University of Genoa (Italy). Malabsorp-tive procedures such as bilipancreatic diversion (BPD) are “considered unsuit- able a priors despite the lack of any evi-dence against its safety or effectiveness in adolescents.”

During 1976-2005, 76 adolescents re- ceived BPD surgery at the University of Genoa. Excluding 7 patients with Prader-Willi syndrome and 1 with Turner’s syn- drome, the remaining 68 had a mean of 11 years of follow-up, ranging from 2 to 23 years. On average, the patients were near- ly 17 years of age at the time of the opera-tion, weighed 125 kg, and had a BMI of 46. No patients died during surgery, and one had a wound dehiscence.

At their longest point of follow-up, pa-tients lost a mean of 78% of their excess weight. Four patients lost less than 50% of excess weight. Of those, three underwent a revision and one was converted from a vertical banded gastroplasty to a pre-operative BMI of 26.

Obesity-related comorbidities resolved in a significant percentage of patients; hy-pertension was reduced from 49% to 9%, dyslipidemia from 16% to 0%, and glu-cose-intolerant or type 2 diabetes from 7% to 0%.

Twelve patients developed protein malnutrition at some point 1-10 years after surgery, and two patients had recurrent protein malnutrition. Those who experi- enced protein malnutrition after surgery had significantly higher initial body weight and BMI than did those who did not have malnutrition.

The incidence of protein malnutrition decreased steadily during the 30-year pe- riod of the study from 30% in the first few years to 2% in the last few years. The length of the common limb remained 50 cm, but as the surgeons gained experience, they adapted alimentary limb lengths to individual characteristics, and gastric sizes were not restricted to prevent protein mal-nutrition, Dr. Papadia said.

In a range of 4-18 years after BPD surgery, 18 women gave birth to 28 healthy infants. One infant was mentally retarded. Another two women died of se- vere protein malnutrition at the end of their pregnancies. A total of 19 reoperations were performed in 14 patients, including 5 elonga-tions and 2 restorations. Overall, three pa-tients in the cohort died (4)—two from protein malnutrition during pregnancy and one from acute pancreatitis.