Roux-en-Y Bypass Aids Esophageal Scleroderma

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SAN DIEGO — Laparoscopic Roux-en-Y gastric bypass is an attractive surgical strategy for the management of esophageal scleroderma, Dr. Michael S. Kent reported at the annual meeting of the Society of Thoracic Surgeons.

Roux-en-Y gastric bypass (RYGBP) provides better control of medically refractory gastroesophageal reflux and dysphagia with far less abdominal bloating than does fundoplication, the most widely used operation in the treatment of esophageal scleroderma. And RYGBP does so with much less perioperative morbidity than does esophagectomy, another operation utilized in the disorder, said Dr. Kent of the University of Pittsburgh.

Scleroderma is an uncommon disease marked by smooth-muscle atrophy and collagen deposition in the skin, lungs, and gastrointestinal tract. Roughly 5,000 new cases per year are diagnosed in the United States. Esophageal involvement is both extremely common and severe; in fact, roughly 80% of scleroderma patients develop heartburn and/or dysphagia within 2 years of diagnosis. Barrett’s esophagus and stricture can develop quickly.

The two chief causes of severe reflux in scleroderma patients are an immotile esophagus and an ineffective lower-esophageal sphincter.

“Often, no lower esophageal sphincter pressure can be identified on manometry, and the stomach and esophagus tend to form a common cavity,” noted Dr. Kent. Gastric dysmotility is likely to be present, encouraging both acid and alkaline reflux into the esophagus. In addition, these patients often have impaired production of saliva, which normally plays a key role in neutralizing gastric acid.

Dr. Kent presented a retrospective series of 23 esophageal scleroderma patients who underwent surgery at the hands of seven thoracic surgeons at the university. Of these patients, 10 got fundoplication, eight received RYGBP, and five had esophagectomy.

For the scleroderma patients, surgeons modified the standard RYGBP operation commonly used in morbid obesity in three ways: They created a large, nonrestrictive anastomosis between the stomach and small bowel; they fashioned a shorter-than-typical Roux limb from the upper stomach pouch to the small bowel in order to minimize malabsorption; and they inserted a feeding tube in the gastric remnant for postoperative nutrition, Dr. Kent explained.

No significant complications occurred in patients treated by fundoplication or RYGBP. Esophagectomy was another matter: One patient with pulmonary hypertension died soon after the esophagectomy. Two of the other four who underwent the procedure developed pneumonia, one experienced an anastomotic leak, and one required tracheostomy.

At a median 25 months of follow-up, mean scores on a 5-point dysphagia scale were 1.86 in the fundoplication group and 1.75 in the esophagectomy group, compared with just 0.43 in the RYGBP group. On a 45-point, nine-question reflux scale on which a score of 15 or more is considered clinically significant, mean scores were 15.6 in the fundoplication arm, 10.0 with esophagectomy, and 4.0 in the RYGBP group. Abdominal bloating was fivefold more common following fundoplication than it was following RYGBP.

Excess weight loss has been viewed as a potential concern with RYGBP in patients with a chronic disease such as scleroderma. But it wasn’t a problem with the modified RYGBP. Weight stabilized several months after the procedure, and no patient’s body mass index (kg/m²) dropped below 18.

Dr. Malcolm M. DeCamp, chief of cardiothoracic surgery at Beth Israel Deaconess Medical Center, Boston, noted after the presentation that pulmonary disease is quite common in scleroderma patients. The last 5 years have brought growing evidence that fundoplication improves the outcome of lung transplantation in this population, he said, with a reduction in the rate of obliterative bronchiolitis. Dr. DeCamp asked what the results were in such cases when using RYGBP.

Dr. Kent replied that four of the patients reviewed underwent lung transplantation following RYGBP. In each case, excellent reflux control was documented by 24-hour esophageal pH monitoring as a precondition for transplant, he said.