Vagal-Sparing Esophagectomy Lowers Morbidity

BY BETSY BATES
Los Angeles Bureau

SAN FRANCISCO — Patients with esophageal adenocarcinoma may benefit from reduced postsurgical morbidity after undergoing vagal-sparing esophagectomy, Dr. Daniel S. Oh reported at the annual clinical congress of the American College of Surgeons.

Compared with other surgical options, "vagal-sparing esophagectomy is associated with reduced morbidity and shorter length of stay, with similar early outcomes," said Dr. Oh, speaking on behalf of a team of surgeons at the University of Southern California led by Dr. Thomas R. DeMeester.

Pioneered at USC, the vagal-sparing procedure preserves the vagal nerves and gastric reservoir. The diseased esophagus is removed from the mediastinum with a vein-stripping tool and is replaced by a section of the patient's colon or a gastric tool formed from the greater curvature of the stomach. The procedure is aimed at reducing postsurgical gastrointestinal side effects of traditional esophagectomy, such as dumping syndrome, diarrhea, and reduced stomach capacity.

The incidence of esophageal adenocarcinoma is rising faster than for any other cancer, noted Dr. Oh, who presented an 18-year retrospective study of the USC experience with surgical options for treating this increasingly important malignancy.

He reviewed 78 cases of esophageal adenocarcinoma with invasion through the basement membrane into the lamina propria, but not through the muscularis mucosa. Median follow-up was 38 months.

The cases included 65 related to Barrett's esophagus and 13 cases associated with intestinal metaplasia of the cardia (CIM). Gastroesophageal reflux disease symptoms were present in 63 of 65 of the Barrett's cases, and 10 of 13 of those associated with CIM. The symptoms were present for 20 years, on average, in Barrett's patients vs. 8 years for CIM patients. Infection with *Helicobacter pylori* was rare in both groups; just three of the Barrett's patients, and none of the CIM patients had infection.

COURTESY DR. DANIEL S. OH

An esophageal adenocarcinoma lesion is visible on endoscopy.

A subgroup of patients underwent lymphadenectomy; just 1 lymph node in 1,020 sampled (1 patient in 23) showed evidence of metastasis with hematoxylin and eosin staining. Immunohistochemistry showed evidence of micrometastasis in 3 of the 848 lymph nodes examined (2 of 19 patients).

"Based on the low prevalence of metastasis in our patients, we began looking at the extent of resection [being performed], in order to lessen the morbidity of esophagectomy," Dr. Oh said.

Only 2 complications were seen in the 20 patients treated with vagal-sparing esophagectomy, compared with 11 complications in the 23 patients treated with en bloc esophagectomy and 13 complications in the 31 patients who had a transhiatal esophagectomy (THE), a procedure developed at the University of Michigan, Ann Arbor. Four patients underwent simple transthoracic esophagectomy due to complicating factors such as prior radiation that precluded a typical transhiatal esophagectomy with an anastomosis in the neck. No patient in any group had residual signs of Barrett's esophagus.

The hospital stay was also shorter: 12 days after vagal-sparing esophagectomy, compared with 22 days after en bloc resection and 17 days after THE.

The overall operative mortality was nearly 3% (2 patients). Two patients died of systemic disease, one at 2 years and one at 7 years following resection.

"There was no difference in survival based on the type of surgical resection performed," said Dr. Oh, but he noted that the 5-year follow-up was longer for the en bloc resection patients than for the others.

In upper endoscopies performed by the surgeon prior to surgery, 53 of 78 patients had a visible lesion, and the lesion was cancerous in 48. In five patients, high-grade dysplasia was diagnosed within a visible lesion. Among 25 patients with no visible lesion, 16 had cancer and 9 had high-grade dysplasia.

The tumor origin in almost half of the patients in the series was within 1 cm of the gastroesophageal junction. There was a "progressive decrease in the frequency [of tumors] further up the esophagus," Dr. Oh said. ■

Study Finds LTE the Safest of Less-Invasive Esophagectomies

BY KATE JOHNSON
Montreal Bureau

MONTREAL — Laparoscopically assisted transhiatal esophagectomy is safe and technically feasible in most patients, but attempting the operation entirely through the laparoscope can result in higher morbidity rates, according to Dr. Dalilah Fortin.

In a prospective study that she presented at the annual meeting of the Canadian Association of Thoracic Surgeons, Dr. Fortin and her colleagues at the London (Ontario) Health Sciences Center concluded that laparoscopic-assisted transhiatal esophagectomy (LTE)—although not the least invasive approach—is the safest and most feasible of the minimally invasive techniques for esophagectomy.

'If you want the least invasive approach, you have to do a right video-assisted thoracic esophageal mobilization through the chest.'

"If you want the least invasive approach, you have to do a right video-assisted thoracic esophageal mobilization through the chest and then a laparoscopy in the abdomen, and then you need only a small incision to get the specimen out. But this is a complex operation; there is a learning curve, and the morbidity is higher," she said in an interview.

The study involved 48 patients scheduled for minimally invasive esophagectomy. At exploratory laparoscopy, five of the patients were found to be unresectable and were converted to minilaparotomy with feeding-tube placement. Another five patients were converted to laparotomy and underwent gastrectomy.

Of the remaining 38 patients, 26 underwent LTE, 4 had a right thoracotomy and laparoscopic-assisted esophagectomy (T-LE), and 8 had the least invasive right video-assisted thoracic esophageal mobilization and laparoscopic esophagectomy (V-LE).

A total of nine procedures (23%) were converted to laparotomy—four for local invasion, four for adhesions, and one for spleen injury. The operating time, length of hospital stay, and rate of major complications were all significantly increased in the V-LE group.

Median operating time was 475 minutes in the V-LE group compared with 330 minutes and 270 minutes in the T-LE and LTE groups, respectively. In addition, patients in the V-LE group spent a median of about 40 days in the hospital, compared with about 10 days in the other groups.

Major complications leading to reoperation occurred in two LTE patients (port-site hernia, colon herniation), one T-LE patient (chylothorax), and five V-LE patients (three chylothorax, one empyema, one bronchial injury). There was one postoperative death, and two patients died within 3 months of surgery from metastatic disease.

Initial laparoscopic staging was possible, with up to 29 lymph nodes per resected specimen identified and histologically examined, Dr. Fortin said. ■

Fixed-Combination PPI/NSAID Helps to Prevent Mucosal Injury

HONOLULU — A novel fixed-combination tablet comprising an immediate-release proton pump inhibitor plus an enteric-coated NSAID showed considerable promise for the prevention of upper GI mucosal injury in a pilot study, Dr. W. James Alexander reported at the annual meeting of the American College of Gastroenterology.

Trials are planned on the efficacy of the drug, which is designed to ensure adherence to GI therapy.

DR. ALEXANDER

Large clinical trials are now being planned to evaluate the efficacy of the fixed-combination drug, which is designed to ensure adherence to gastroprotective therapy when recommended for NSAID users, explained Dr. Alexander, senior vice president of product development and chief medical officer at Pozen Inc., Chapel Hill, N.C.

Pozen has been issued a patent for the fixed-combination tablet, known for now as PN 100. Each tablet contains 15 mg of immediate-release lansoprazole surrounding a core of 500 mg of naproxen, which has a pH-sensitive enteric coating.

Dr. Alexander reported on 60 healthy volunteers randomized to 14 days of one of three treatment regimens: PN 100, twice daily; 500 mg of enteric-coated naproxen, twice daily; or 15 mg of delayed-release lansoprazole in the morning plus naproxen 500 mg, twice daily, which is the type of gastroprotective regimen that is most often used in current clinical practice.

Endoscopy performed on day 14 by a gastroenterologist blinded to treatment status revealed 5 subjects in the PN 100 group had Lanza grade 3 or 4 mucosal lesions, compared with 15 subjects on twice-daily enteric naproxen and 14 on delayed-release lansoprazole plus naproxen twice daily.

Two patients on enteric naproxen developed gastric ulcers, as did one on delayed-release lansoprazole plus naproxen. None of the PN 100-treated subjects developed gastric ulcers.

The mean cumulative number of erosions found at endoscopy on days 8 and 14 was 10 in the PN 100 group, 26 with enteric naproxen alone, and 19 with delayed-release lansoprazole plus naproxen. In addition, 24-hour gastric pH monitoring indicated that nocturnal acid suppression was better with twice-daily PN 100 than it was with once-daily delayed-release lansoprazole plus twice-daily naproxen.

—Bruce Jancin