Familial Trend Detected In Barrett's Esophagus

BY BRUCE K. DIXON
Chicago Bureau

CHICAGO — Family history plays a larger role in Barrett's esophagus and associated cancers than was previously recognized, according to Dr. Amitabh Chak.

"There's clearly an inheritance pattern that suggests an autosomal dominant disease," said Dr. Chak at the annual Midwestern clinical research meeting.

Efforts to track down a genetic basis for Barrett's esophagus (BE) and related adenocarcinomas began with a cross-sectional pilot study in which Dr. Chak, a gastroenterologist at Case Western Reserve University, Cleveland, and his colleagues compared 56 patients with BE or adenocarcinoma of the esophagus or gastroesophageal junction with 106 controls who had gastroesophageal reflux.

Screen individuals with reflux who have two or more family members with Barrett's esophagus or esophageal cancer.

DR. CHAK

"The Barrett's and esophageal cancer cases reported a positive family history for these diseases significantly more often than did the reflux controls," Dr. Chak said at the meeting of the Central Society for Clinical Research and the Midwestern Section of the American Federation for Medical Research.

"That pilot study led us to formulate the more focused hypothesis that BE and associated cancers are complex genetic diseases with a combined underlying genetic and environmental cause. I think there's an inherited susceptibility to develop intestinal metaplasia, but that susceptibility may be present in only a subset of these patients who have this disease," he said.

To test their hypothesis, the investigators went on a "gene hunt," beginning with the endoscopic screening of relatives with BE or esophageal cancer. The breakthrough came with the identification of a large family with 13 affected members. The findings showed an inheritance pattern that suggested an autosomal dominant disease, Dr. Chak said.

With the help of investigators in the Familial Barrett's Esophagus Consortium, the Case Western team began to accumulate prospective data on affected families and published its first report on phenotype and demographics in 2004. They found endoscopy-identified esophageal cancer and BE in a substantial proportion of first-degree relatives of affected members of 69 families. In addition, a familial susceptibility to develop Barrett's epithelium appeared to be present in a subset of patients with BE and esophageal cancer (Am. J. Gastroenterol. 2004;99:2107-14).

The database, which has now grown to include 140 families, shows that 7.3% of 413 probands have a confirmed affected (with BE or esophageal cancer) first-degree or second-degree relative.

"We compared the risk factors for BE in familial and nonfamilial BE and esophageal cancer, and the main difference was that familial patients with cancer have a lower body mass index at diagnosis and at 1, 5, and 10 years before diagnosis," he said, adding that familial Barrett's esophagus probands with cancer may be less obese and have shorter durations of obesity than those with apparently "sporadic" cancer.

The researchers currently are conducting linkage analysis to identify putative susceptibility genes and confirm their hypothesis. Meanwhile, Dr. Chak's recommendation is that all susceptible patients be screened endoscopically, which can be done relatively quickly and without sedation using an ultrathin endoscope.

Screening should include individuals with reflux who have two or more family members with Barrett's esophagus or esophageal cancer, one of whom is a first-degree relative (parent, sibling, or child), Dr. Chak said in an interview.

An unusual incidence of disease in second-degree relatives should raise suspicion, he added. ■

In-Office, Unsedated Transnasal Esophagoscopy Shows Promise

BY PATRICE WENDLING
Chicago Bureau

CHICAGO — Transnasal esophagoscopy easily identified esophageal abnormalities without sedation in an office-based setting during a small, prospective study.

The procedure, which allows endoscopic visualization of the aerodigestive tract from the nasal vestibule to the gastric cardia, is currently limited to a small number of U.S. centers. But the findings suggest that office-based transnasal esophagoscopy could make screening more accessible in patients with esophageal reflux, globus, and dysphagia, Dr. Thomas Takoudes said at the Combined Otolaryngology Spring Meetings.

COURTESY DR. THOMAS TAKOUDES

Dr. Thomas Takoudes demonstrates the procedure, which is limited to a small number of U.S. centers.

Esophageal reflux affects up to 40% of adult Americans, many of whom will develop Barrett's esophagus, a known risk factor for esophageal cancer. "Given the incidence of severe reflux, this [procedure] should be as accessible as digital rectal exams and [prostate-specific antigen] tests for prostate cancer and Pap tests for cervical cancer," he said.

The study included 21 consecutive transnasal esophagoscopy procedures performed in 19 patients over a 6-month period. Dr. Takoudes used the Vision-Sciences Inc. esophagoscope, which has a single-use, disposable sheath. In all of the patients, the nose was sprayed with oxymetazoline and lidocaine to reduce discomfort.

No complications were observed. "With this procedure, the tube goes through the nose without sedation, and a half an hour later, they go home or to work. It's so much easier for the patient," he said.

Indications for the procedure were: laryngopharyngeal reflux with failed proton pump inhibitor therapy in 11 patients (58%); dysphagia without a history of reflux in 7 (37%); head/neck cancer in 2 (11%); and abnormal esophagus on CT scan in 1 patient (5%). Some patients had multiple indications.

One procedure could not be completed due to patient discomfort.

Significant findings were identified in 10 of 20 procedures (50%), including two cases of diverticulum, two Candida esophagitis, two hiatal hernia, two patulous esophagus, two abnormal motility, two Barrett's esophagus, and one achalasia, said Dr. Takoudes, of the Ear, Nose, & Throat Medical and Surgical Group in New Haven, Conn. Multiple findings were seen in some patients.

Use of transnasal esophagoscopy as a screening tool was validated in a recent large study in which significant findings were identified in half of 592 procedures performed for reflux, globus, or dysphagia. The study was performed in a tertiary care center (Laryngoscope 2005;115:321-3).

Procedure failure rates were similar in both studies; 3% at the tertiary care center and 5% in the office-based setting, Dr. Takoudes said. ■

Ethnicity Matters in GI Lesions With Iron-Deficiency Anemia

BY DOUG BRUNK
San Diego Bureau

LOS ANGELES — In patients with iron-deficiency anemia, significant ethnic differences were found in the frequency, type, and distribution of clinically important gastrointestinal lesions, Dr. Bani Chander reported during a poster session at the annual Digestive Disease Week.

In particular, whites with iron deficiency had lower rates of clinically important lesions in the lower GI tract, compared with blacks, Hispanics, and other ethnic groups, the results from a study of Veterans Affairs patients showed.

"Not only do [blacks and Hispanics] have more advanced lesions, but their lesions also tend to be proximal. Instead of doing a flexible sigmoidoscopy every 3-5 years, we might [need to do] only colonoscopy, to [get to] the proximal colon," said Dr. Chander, a recent New York University graduate.

She and her colleagues evaluated demographic and clinical data from 1,081 consecutive patients referred to the VA New York Harbor Healthcare System for evaluation of iron-deficiency anemia. Of those, 406 were white, 442 were black, 168 were Hispanic, and 65 were from other ethnic groups. Iron deficiency was defined as a transferrin saturation of less than 15% and a ferritin level of less than 20 µg/L. Anemia was defined as a hemoglobin level of less than 13 g/dL in men and less than 12 g/dL in women. All of the patients had a same-day esophagogastroduodenoscopy and colonoscopy.

The researchers identified one or more clinically important GI lesions in 54% of whites, 65% of blacks, 63% of Hispanics, and 69% of those from other ethnic groups. About 33% of whites had clinically important lesions in the upper GI tract, compared with 32% of blacks, 43% of Hispanics, and 54% in other ethnic groups. In the lower GI tract, 32% of whites had clinically important lesions, compared with 48% of blacks, 43% of Hispanics, and 42% in other ethnic groups. Upper and lower GI lesions were identified in 11% of whites, 15% of blacks, 23% of Hispanics, and 26% in other ethnic groups.

They also noted that the frequency of clinically important lesions that were proximal to the splenic flexure was significantly higher in blacks (35%) and Hispanics (27%), compared with whites (13%) and those from other ethnic groups (8%).

Of those who had colorectal cancer, the prevalence of advanced lesions was significantly higher in blacks (86%) and Hispanics (100%) than it was in whites (63%) and patients from other ethnic groups (75%).

"Most likely Hispanics are seeking less health care than other groups," said Dr. Chander, adding that diet and other lifestyle choices may also play a role. ■