

Factors Sort Eosinophilic Esophagitis, GERD

BY MARY ANN MOON

A group of nine easily obtained measures reliably differentiates eosinophilic esophagitis from gastroesophageal reflux disease in adults, and a slightly different set of factors reliably distinguishes between these two disorders in the pediatric population, Dr. Evan S. Dellon and his colleagues reported.

It is often difficult to distinguish eosinophilic esophagitis from GERD because many symptoms, clinical features, endoscopic findings, and histologic features of the two conditions overlap or are nonspecific, Dr. Dellon of the University of North Carolina, Chapel Hill, and his associates wrote (*Clin. Gastroenterol. Hepatol.* 2009 [doi:

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To find a way to reliably establish a differential diagnosis, the investigators performed what they described as the largest study of the issue to date, reviewing extensive data on 151 cases that met strict criteria for eosinophilic esophagitis, as well as 226 cases of GERD. All the patients were treated at a single medical center from 2000 to 2007.

In the eosinophilic esophagitis (EoE) cases, all other potential causes of eosinophilia had been excluded, and biopsies had been performed while patients were taking acid suppressors or after they had failed to respond to acid suppression.

Nine factors were found to reliably predict EoE and distinguish it from GERD. Clinically, adults with EoE were younger (mean age 25 years) than those with GERD (mean age 33 years), more likely to report dysphagia and food impaction while GERD patients reported heartburn and abdominal pain, and much more likely to have concomitant food allergies, allergic rhinitis or dermatitis, and asthma. Therefore patient age, the presence of dysphagia, and the presence of documented food allergy made up the first three of the nine factors.

Endoscopically, adults with EoE were "substantially" more likely to have esophageal rings, strictures, stenoses, linear furrows, crepe-paper mucosa, and white plaques or exudates, while patients with GERD were more likely to have hiatal hernias. Thus, esophageal rings, furrows, and plaques on esophagogastroduodenoscopy, plus the absence of hiatal hernia, comprised the next four of the nine predictive factors.

Histologically, the mean maximum eosinophil count was much higher in the EoE group (121) than in the GERD group (34), as was the mean eosinophil

count per five high-powered fields (76 for EoE vs. 16 for GERD). The distribution of eosinophils also was different, with mucosal distribution being diffuse in almost every case of EoE, compared with only 77% of GERD patients.

Eosinophilic degranulation also was much more frequent with EoE (94% of cases) than with GERD (52%). Spongiosis was more common, affecting 89% of EoE cases but only 59% of GERD cases.

Therefore, the maximum eosinophil count and the presence of eosinophilic degranulation on biopsy specimens were the final two in the set of nine factors that distinguished the two disorders.

A model that included these nine factors showed "excellent predictive ability" and correctly classified approximately 90% of the study subjects as having either EoE or GERD.

In children, a similar model that in-

cluded eight factors was constructed to differentiate EoE from GERD. These factors were male gender, the finding of linear furrows on endoscopy, a high eosinophil count, the presence of eosinophil degranulation, and the presence of heartburn, food allergy, atopic disease, or asthma.

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