

Mast cell tryptase test may aid in diagnosis of eosinophilic esophagitis

May 4 2010

(PhysOrg.com) -- A pathology test may help doctors distinguish between two separate but overlapping esophageal disorders that require different courses of treatment, according to a study by researchers at the University of North Carolina at Chapel Hill.

The study, presented Tuesday, May 4 at the annual Digestive Disease Week conference in New Orleans, compared biopsies taken from the esophageal linings of patients treated at UNC Hospitals who had a confirmed diagnosis of either eosinophilic esophagitis (EoE) or [gastroesophageal reflux disease](#) (GERD).

EoE is a newly recognized but increasingly seen condition in which certain [white blood cells](#) (the eosinophil) move to the lining of the esophagus, a place where they normally should not be. The main symptoms of EoE in adult patients are trouble swallowing or food getting stuck in the esophagus. However, EoE symptoms can also include heartburn, chest pain, vomiting or regurgitation, all of which are also symptoms of GERD, which is a much more common condition. GERD patients can also have eosinophils seen in their esophageal biopsies.

In the study, 54 EoE patients and 55 GERD patients were identified who previously underwent biopsies during an upper endoscopy procedure. The pathology slides of these tissue samples were then re-examined after being stained for tryptase, a marker of another kind of inflammatory cell (the mast cell) that can be present in EoE.

When looked at under a microscope, the tryptase positive mast cells in the biopsies showed up as bright brown dots. Researchers counted the number of mast cells in each sample and compared the results between groups. The EoE patients had a higher maximum tryptase density than the GERD patients and more EoE patients had epithelial mast cells diffusely distributed throughout the biopsy.

Dellon and colleagues concluded that patients with EoE have substantially higher levels of tryptase positive [mast cells](#) in the lining of the esophagus, and that staining for tryptase, above and beyond counting the eosinophils, may be useful in determining whether a patient has EoE.

Provided by University of North Carolina at Chapel Hill School of Medicine

Citation: Mast cell tryptase test may aid in diagnosis of eosinophilic esophagitis (2010, May 4) retrieved 4 May 2024 from

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