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## GASTROENTEROLOGY AND HEPATOLOGY

### EOSINOPHILIC ESOPHAGITIS

Eosinophilic Esophagitis (EE) is an inflammatory condition where inflammatory white blood cells called eosinophils congregate in the lining of the esophagus causing a thickening of the lining and subsequent narrowing of the “lumen” or inside of the esophagus. Eosinophils are white blood cells that are stimulated by foreign substances or “allergens,” leading to an inflammatory response. The allergens that lead to this inflammation are unknown but present theories suggest certain foods may be one culprit.

It is common in younger individuals with an average age of about 30 but can be seen in young children and is seen predominantly in males with a ratio of 3:1 over females. Usual symptoms are food temporarily sticking upon swallowing (“dysphagia”) and actual obstruction of the esophagus with food. Allergic conditions are commonly seen in EE such as airways allergy (60%), food allergy (10%) and skin allergy (10%), and a family history increases one’s risk of this condition.

The blood count may show an increased number of eosinophils in the blood stream. The diagnosis is best made by an Upper Gastrointestinal Endoscopy with biopsies of the esophageal lining. Changes seen on endoscopy include circumferential “rings” in the mucosal lining that look like the inside of a trachea and linear “furrows” that look like superficial ulcerations going up and down the esophagus. A localized narrowing or “stricture” may also be seen, especially at the junction of the esophagus and stomach. Biopsies typically show a large number of eosinophils in the lining of the esophagus. An abnormality of esophageal muscle function or “motility” may also be seen and can be detected on tests of esophageal motility.

The treatment presently consists of efforts to identify foods that are causing an allergic reaction, medicines that may reduce the allergic response and dilation or stretching of the esophagus if there is significant sticking of foods. There are blood tests and skin tests to identify specific foods that are causing an allergic reaction and these foods can be eliminated from the diet. Unfortunately, the efforts at food elimination have not been a very successful treatment. Steroids are potent anti-inflammatory medicines that can be swallowed, and by direct action on the esophageal lining, reduce inflammation and thus narrowing of the esophagus. Fluticasone is one such steroid that has been studied and used, but how long to use it and what to do when it is stopped are unanswered questions. Montelukast or Singulair is a medication that reduces the inflammatory response and may be very helpful but there is not a lot of experience with this medication for EE. Esophageal dilation of a narrowed esophagus or at a point of stricture has been very helpful in alleviating symptoms and in the opinion of this physician is the most direct and successful treatment.

Esophageal dilation involves an Upper Gastrointestinal Endoscopy where one is sedated intravenously and then a video endoscope tube is passed down the mouth into the esophagus, stomach and commonly a few inches into the small intestine. Balloons of various sizes may be passed through this scope and insufflated under direct vision to a given diameter for up to a minute at each size. The endpoint of dilation is a visible tear of the esophageal mucosal lining so one knows one has increased the size of the esophageal lumen. Large tears or even perforation of the esophagus may occur as a complication, but the procedure is generally quite safe and effective. Balloons of gradually increasing size may be used to limit the size of these tears. Occasionally chest pain can occur post-procedure without any significant complication, and resolves in a day or two. Initially the medical literature suggested that esophageal dilation in patients with EE was more dangerous than in other patients who need dilation. It has more recently been shown that better success is seen when larger balloons are used and this can be done with low complication rates.

The cause, natural history and optimal treatment of EE is not known and its incidence and prevalence has been increasing over the last decade. Much research is being done to better characterize these issues, but fortunately, most patients do well and respond to treatment.