

EOSINOPHILIC ESOPHAGITIS

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Eosinophilic Gastrointestinal Disorders (EGID) represent a spectrum of disorders demonstrating gastrointestinal eosinophilia without any known cause for eosinophilia. There is no epidemiological data from Pakistan, however a systematic review recently noted that the entity exhibits similar characteristics in Asian populations.¹ The entire gastrointestinal tract from the esophagus to the colon can be affected. This group of disorders includes most commonly eosinophilic esophagitis, and less frequently gastroenteritis and colitis.²

First described in 1978, the incidence of Eosinophilic Esophagitis (EoE) has been increasing, and is marked by a chronic relapsing course. EoE has a bimodal distribution, affecting children and also during the third and fourth decades of life. It predominantly affects males (3:1), and frequently affects non-Hispanic Caucasians. A positive family history is frequently observed.

The first consensus guidelines were formulated in 2007, with updates from the International Gastrointestinal Eosinophil Researchers (TIGERS) Summary in 2011.^{3,4} The most recent practice guidelines are from the American College of Gastroenterology (ACG) from 2015.² Eosinophilic Gastrointestinal Disorders (EGID) represent a spectrum of disorders

demonstrating gastrointestinal eosinophilia without any known cause for eosinophilia. There is no epidemiological data from Pakistan, however a systematic review recently noted that the entity exhibits similar characteristics in Asian populations.¹ The entire gastrointestinal tract from the esophagus to the colon can be affected. This group of disorders includes most commonly eosinophilic esophagitis, and less frequently gastroenteritis and colitis.²

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The first consensus guidelines were formulated in 2007, with updates from the International Gastrointestinal Eosinophil Researchers (TIGERS) Summary in 2011.^{3,4} The most recent practice guidelines are from the American College of Gastroenterology (ACG) from 2015.² The pathogenesis involves a complex interplay of genetic, dietary, and environmental factors.^{5,6} The exact immune mediated mechanisms for the esophageal infiltrate are not known, and could be immunoglobulin E (IgE)-mediated and also delayed T helper type 2 (Th2) responses. Dietary allergens are known to play a key role.

Regarding clinical presentation, food impactions are common, while other symptoms include reflux, retrosternal pain and abdominal pain in adults. Careful history taking is essential, especially regarding dietary and eating habits. For pediatric age groups, symptoms are

similar but expression of symptoms varies with age, including aversion to food, regurgitation or vomiting.⁶⁻⁸ An association is noted with atopy in general, and a high frequency of asthma, eczema and allergic rhinosinusitis is seen in patients with EoE. A number of clinical conditions can be associated with esophageal eosinophilia and esophageal dysfunction, notably Gastro Esophageal Reflux Disease (GERD), although the eosinophilic infiltrate resolves after Proton Pump Inhibitor (PPI) therapy, aptly called PPI responsive esophageal eosinophilia (PPI-REE).²

An endoscopy with esophageal biopsies needs to be performed. This may reveal mucosal rings or a corrugated appearance (feline esophagus), mucosal edema, decreased vascularity, narrowing and furrows. A reliable diagnosis can however only be made with histology. Esophageal biopsies must demonstrate mucosal eosinophilia of at least 15 per high power field (hpf). Biopsies must be obtained from the proximal and distal esophagus and typically at least 6 biopsies are suggested to maximize the yield.⁹ Also, the eosinophilia must persist after a trial of PPI treatment, and other causes of secondary eosinophilia must be ruled out.

Regarding management, a multidisciplinary approach is needed. Treatment options include

dietary restriction, topical steroids and endoscopic therapy. Swallowed, rather than inhaled fluticasone is used with a multi-dose inhaler preparation. The most recent ACG guidelines suggest swallowed fluticasone at a dose of 88-440 mcg/day in divided doses for children and 880-1760 mcg/day in divided doses for adults.^{2,10} Budesonide is used in the form of swallowed nebulizer preparations and also a viscous liquid slurry.¹¹

Dietary restrictions include an elemental diet consisting of amino acid based formulas, and an empiric six food elimination diet (SFED). The SCFD eliminates soy, egg, milk, wheat, nuts, and seafood from the diet; agents which are known triggers of EoE. Cutaneous allergy testing is still controversial. With strict adherence, response has been noted for several years, however non adherence and subsequent recurrence is an issue.¹²⁻¹⁴

Endoscopic treatment with gradual dilation is used in patients with significant stenosis. While initially reporting high rates of perforation, if performed at high volume tertiary centers, complication rates are much lower than originally anticipated.¹⁵ Novel treatment modalities targeting immune modulation are being investigated and will likely show promising results in the future.

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