

Eosinophilic Gastrointestinal Disorders



Lisa M. Fahey, MD^{a,b,*}, Chris A. Liacouras, MD^{a,b}

KEYWORDS

- Eosinophilic esophagitis • Eosinophilic gastroenteritis • Eosinophilic proctocolitis
- Proton pump inhibitor-responsive esophageal eosinophilia • Food allergens

KEY POINTS

- Eosinophilic esophagitis (EoE) is an atopic disease that is characterized by an isolated infiltration of eosinophils into the epithelium of the esophagus.
- A diagnosis of EoE requires an esophageal biopsy while on a proton pump inhibitor for at least 6 to 8 weeks.
- Proton pump inhibitor–responsive esophageal eosinophilia should always be differentiated from EoE.
- Both medication and dietary therapy options should be considered in patients with EoE.
- Eosinophilic gastroenteritis is described as a pathologic eosinophilic infiltration of any portion of the gastrointestinal tract, and eosinophilic proctocolitis is defined as an abnormal number of eosinophils in the colon alone.

EOSINOPHILIC ESOPHAGITIS

Introduction

Eosinophilic esophagitis (EoE) is an atopic disease that is characterized by an isolated infiltration of eosinophils into the epithelium of the esophagus. EoE is triggered by specific allergens, almost always food antigens; there has been significant research in this area over the past 30 years in order to determine the nature of these specific allergens.¹

Definition

The 2013 revised guidelines for the diagnosis and management of this disease state that EoE is defined as a clinicopathologic disorder that meets the following criteria¹:

1. Presence of symptoms related to esophageal dysfunction

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^a Division of Gastroenterology, Hepatology, and Nutrition, The Children's Hospital of Philadelphia, 3401 Civic Center Boulevard, 7NW, Philadelphia, PA 19104, USA; ^b Department of Pediatrics, The Perelman School of Medicine, University of Pennsylvania, 3400 Civic Center Boulevard, Philadelphia, PA 19104, USA

* Corresponding author. The Children's Hospital of Philadelphia, 3401 Civic Center Boulevard, 7NW, Philadelphia, PA 19104.

E-mail address: faheyL@email.chop.edu

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2. Presence of greater than or equal to 15 eosinophils per high-power field on esophageal biopsy after a trial of a proton pump inhibitor (PPI)
3. Isolation of this mucosal eosinophilic predominance to the esophagus

Of note, symptoms of EoE are often similar to those of gastroesophageal reflux; therefore, the presence of eosinophils on esophageal biopsy is needed to make the diagnosis of EoE.

Prevalence

EoE has increased in prevalence over the past 10 years. The reported prevalence of EoE in 2003 was 4.3 per 10,000 children aged 0 to 19 years. The pediatric male to female ratio is approximately 3:1.²

Cause

EoE is thought to occur in genetically susceptible individuals through predominantly non-immunoglobulin E (IgE)-mediated allergic responses to allergens. These allergens are thought to be predominantly food, although other studies have suggested additional environmental allergens, such as aeroallergens, as potential triggers.³ In general, when food allergens enter the body through a disrupted epithelial barrier, it is postulated that local esophageal antigen presenting cells interact with this antigen. Subsequently, a cascade of proinflammatory cytokines, such as interleukin (IL)-5 and IL-13, as well as chemokines, such as eotaxin-1 and eotaxin-3, are triggered. This trigger results in recruitment of eosinophils to the esophagus.⁴

The first EoE genetic susceptibility locus was recently described at locus 5 q 22.⁵ One of the genes at this locus is thymic stromal lymphopoietin, a T-helper 2 proinflammatory cytokine gene that has been associated with other allergic diseases in the past.

Clinical Symptoms

Symptoms of EoE are detailed in [Table 1](#) and [Box 1](#).⁶

Table 1 Common symptoms of eosinophilic esophagitis	
Younger Children	Older Children and Adolescents
Vomiting	Heart burn
Chronic nausea	Epigastric pain
Regurgitation	Dysphagia
Irritability/feeding difficulties	Nighttime cough
	Food impaction

Data from Liacouras CA, Markowitz JE. Eosinophilic esophagitis: a subset of eosinophilic gastroenteritis. *Curr Gastroenterol Rep* 1999;1:253–8.

Box 1 Less common symptoms of eosinophilic esophagitis
Growth failure
Hematemesis
Esophageal dysmotility
Failure to thrive
Malnutrition

Data from Liacouras CA, Markowitz JE. Eosinophilic esophagitis: a subset of eosinophilic gastroenteritis. *Curr Gastroenterol Rep* 1999;1:253–8.

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