

Eosinophilic Esophagitis

Jesse Liu MD

Assistant Professor

Duke University School of Medicine

Division of Gastroenterology

Learning Objectives

- Apply a working definition for Eosinophilic Esophagitis in your clinical practice
- Recognize the common clinical and histologic features of Eosinophilic Esophagitis
- Know the medications and lifestyle modifications used to treat Eosinophilic Esophagitis

Conceptual Definition

- Chronic
- Immune/antigen-mediated esophageal disease
- Clinically characterized by symptoms of esophageal dysfunction
- Histologically by eosinophil-predominant inflammation

Abbreviation

- EoE
- (Not EE)

Question #1

- What is the proper abbreviation for Eosinophilic Esophagitis?

EoE

Typical Patient

- Male/female ratio 3:1
- History of allergies
- Presentation in childhood or during 3rd-4th decade
- Non-Hispanic whites

Question #2

- True or False: EoE can occur at any age

Childhood symptoms

- Nonspecific and Variable
 - Infants and Toddlers – Feeding Difficulties
 - School-aged children – vomiting or pain
 - Adolescents – dysphagia
- EoE in children is most often present in association with other manifestations of atopic diathesis (food allergy, asthma, eczema, chronic rhinitis, and environmental allergies)

Adult Symptoms

- Stereotypical
 - Solid food Dysphagia (Most Common)
 - Chest pain
 - Food impaction
 - Upper abdominal pain
 - Globus sensation







Question #3

- Childhood symptoms of EoE are nonspecific and _____
- Adult symptoms of EoE are _____

Adult Statistics

- Prevalence of EoE in adults presenting with dysphagia to endoscopy units = 15%
- Food impaction necessitating endoscopic bolus removal occurs in 33%-54%

Question #4

- True or False: Tooth decay is a hallmark physical finding of EoE



Question #5

- True or False: Patients with Gastroesophageal Reflux Disease may have an eosinophilic infiltrate on esophageal biopsy

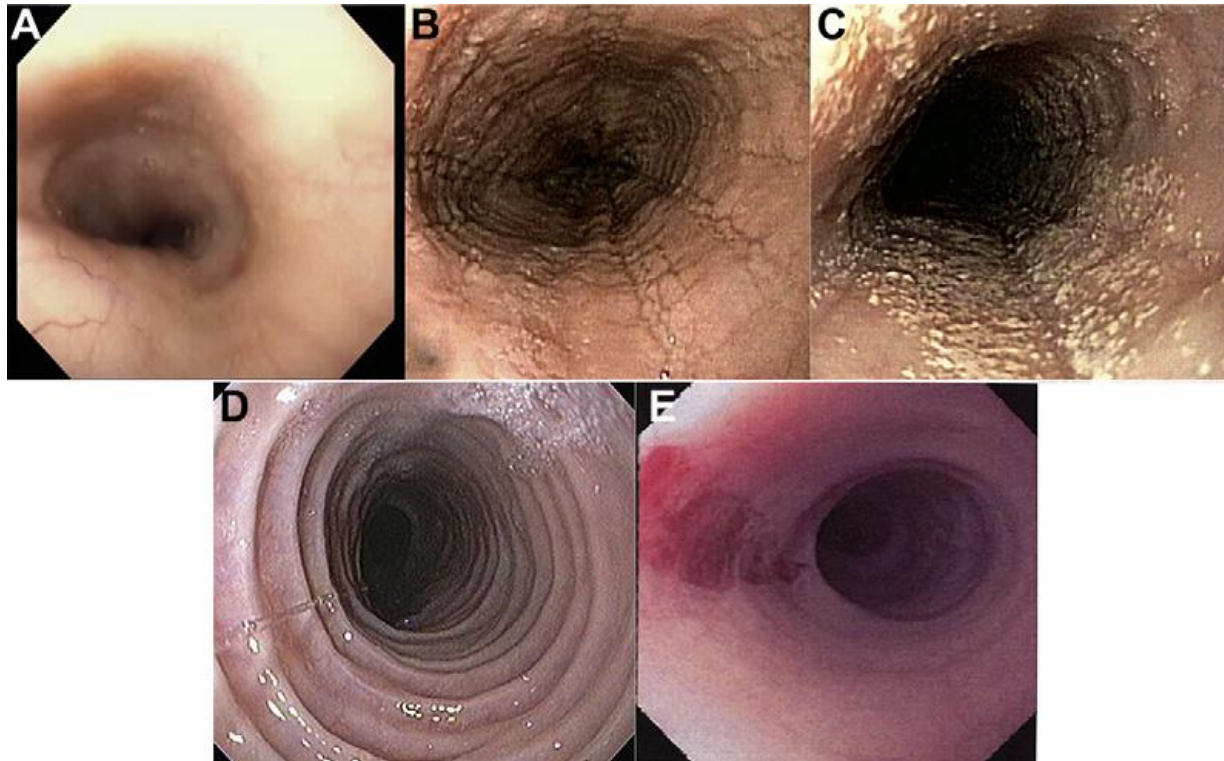
PPI-responsive EoE

- Important subgroup of patients who have
 - Typical EoE symptoms at presentation
 - GERD diagnostically excluded (normal pH monitoring)
 - Clinicopathologic response to PPIs

- Area of unknown: GERD or EoE?



Endoscopic Features



A, Normal esophagus. B, Esophageal furrowing. C, White mucosal plaques. D, Esophageal ring trachealization. E, Small-caliber esophagus with mucosal tearing after endoscopy.

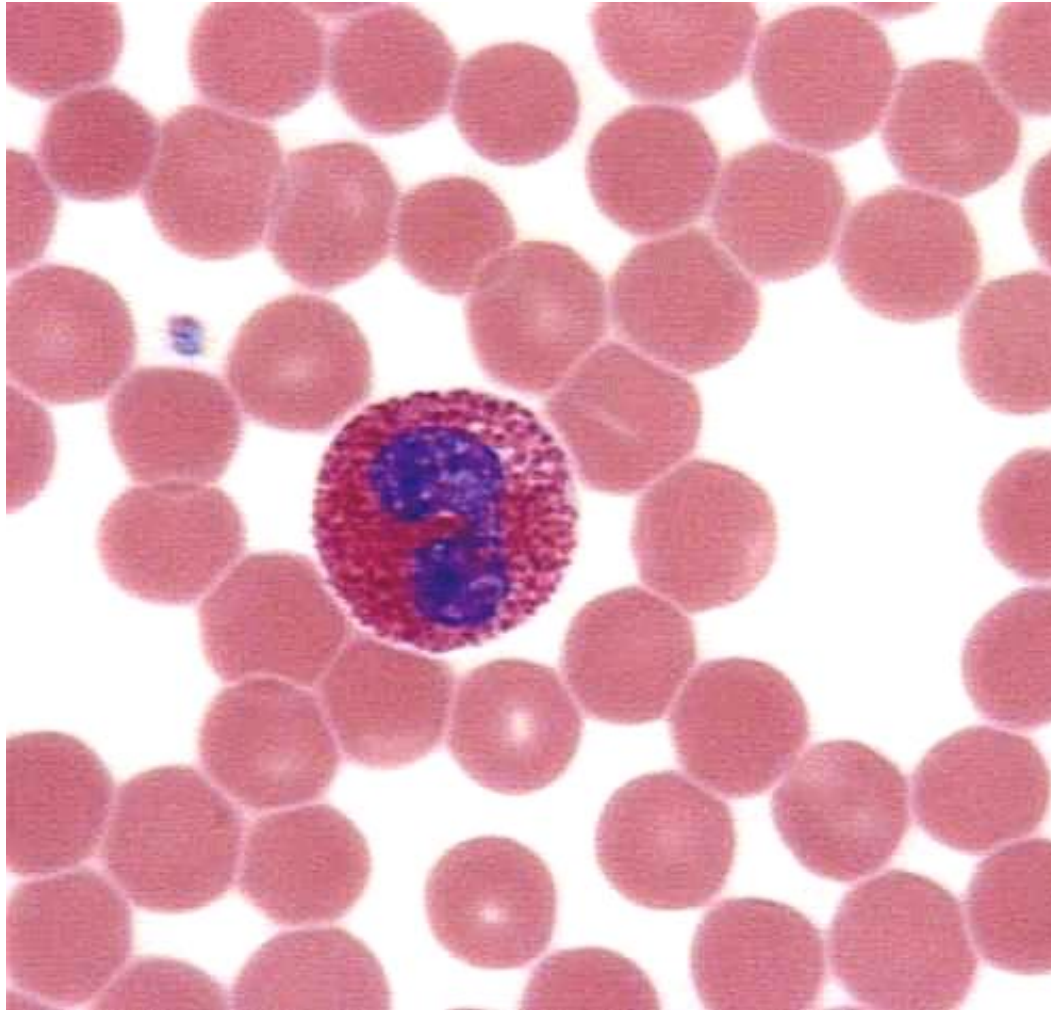
Endoscopic Features Interesting But...

- 222 patients with dysphagia who had EGD
 - 33 had histopathologic evidence of EoE (15%)
 - 21 Patients with Endoscopic features
 - 8/21 (38%) diagnosis confirmed by biopsy

Question #6

- What is the optimal number of biopsies to take to diagnose EoE?
 - 2
 - 3
 - 6
 - 8

Name that cell



Histologic Features

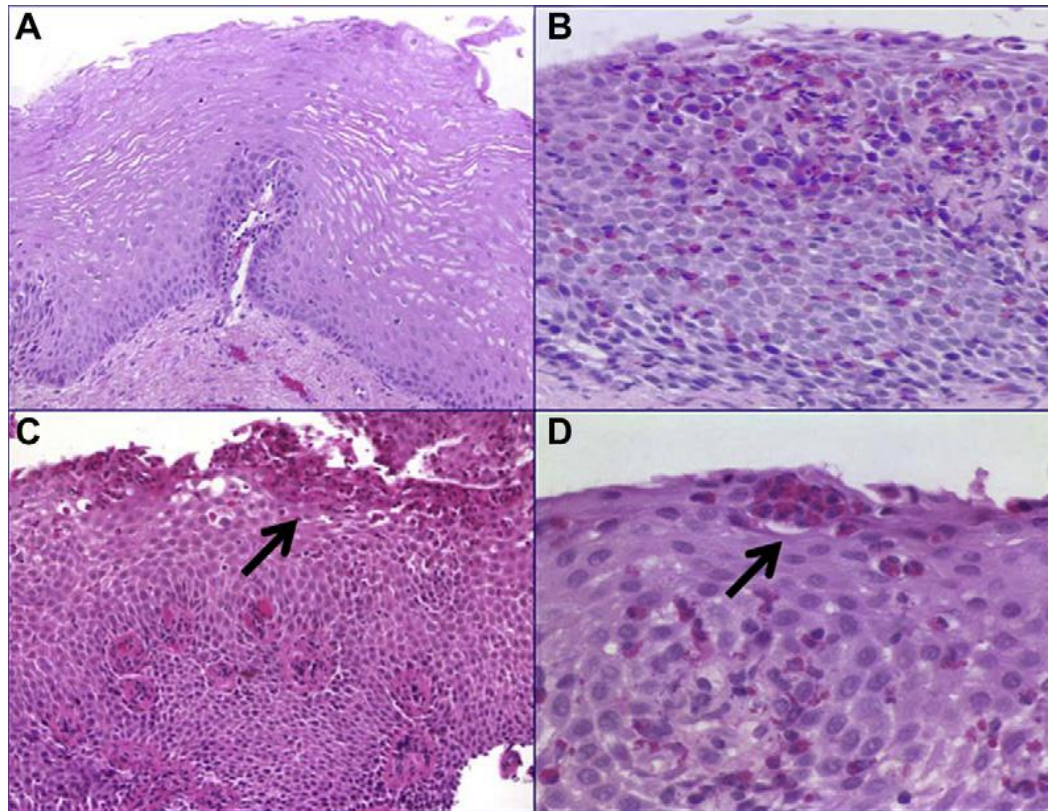


FIG 1. Histology of the esophagus (mucosal biopsy specimens). A, Normal esophagus. B, EoE. C, EoE, superficial layering of surface eosinophils (arrow). D, EoE, microabscess (arrow).

Question #7

- True or False: It is important to obtain a Barium swallow/esophagram in patients whom you suspect to have EoE



Other test to consider

- 24-48 pH testing to exclude GERD





Question #8

- True or False: Patients diagnosed with EoE should undergo a thorough evaluation by an allergist or immunologist

General Allergic Evaluation

- IgE mediated Food Allergens (15-43%)
- Aeroallergens - dust mites, cockroach, seasonal allergies (15-40%)
- Allergic rhinitis (40-70%)
- Asthma (14-70%)
- Eczema (4-60%)

Medical Therapy

- Proton Pump Inhibitor (PPI)
 - GERD
 - PPI responsive EoE
 - Concomitant GERD
- Dose 20-40mg once or twice daily for 8-12 weeks

Medical Therapy (cont'd)

- Corticosteroids
 - Systemic – Severe dysphagia, weight loss, failure to thrive
 - Topical – Effective at inducing remission and for maintenance, relapse after discontinuation common
 - Type and duration of therapy depends on disease severity, patient's lifestyle, ability to continue medication, family resources

Recommended doses of corticosteroids for EoE

Topical swallowed corticosteroids

- Fluticasone (puffed and swallowed through a metered-dose inhaler)
- Adults: 440-880 mg twice daily
- Children: 88-440 mg twice to 4 times daily (to a maximal adult dose)

- Budesonide (as a viscous suspension)
- Children (<10 y): 1 mg daily
- Older children and adults: 1 mg twice daily

Systemic corticosteroids

- For severe cases (eg, small-caliber esophagus, weight loss, and hospitalization)
- Prednisone: 1-2 mg/kg



Dietary Therapy

- Amino acid based elemental formulas
- Dietary restrictions based on multi-modality allergy testing
- Dietary restrictions based on eliminating the most likely food allergens
- Consider consultation with registered dietitian in addition to allergist/immunologist

Complications

- Food Impaction (30-55%)
- Rings
- Strictures >1cm (11-31%)
- Narrow caliber esophagus (10%)
- Spontaneous perforation (rare)
- Higher risk for perforation and post procedure chest pain



Take Home Points

- Consider EoE in patients presenting with Dysphagia, unexplained chest pain, nonresponse to PPI
- Diagnosis is based on clinical features and histologic findings; remember that clinical features and endoscopic findings can be variable
- Aim to distinguish EoE from GERD
- Patients with EoE should be referred for multimodality allergy testing
- EoE is a treatable condition
- The understanding of EoE continues to evolve so stay tuned

Suggested Reference

Eosinophilic esophagitis: Updated consensus recommendations for children and adults

ChrisA. Liacouras,MD et al.

Journal of Clinical Allergy and Immunology July, 2011