The gastroenterologists of the Esophageal and Swallowing Disorders Program at Penn Medicine routinely diagnose and manage a rare disease called eosinophilic esophagitis (EoE). EoE is a disorder characterized by symptoms related to esophageal dysfunction including esophageal dysmotility, dysphagia to solids, chest pain, recurrent food impaction and gastroesophageal reflux. The diagnosis of EoE is made via microscopic review of biopsies obtained during upper endoscopy. Histologically, the disorder presents as dense infiltration of the esophageal squamous epithelium by inflammatory eosinophils.

Eosinophilic proliferation is not usually a normal part of the esophageal anatomy. Thus, the finding of pronounced esophageal eosinophilia on biopsy (peak value of ≥15 eosinophils per high-power field) suggests an abnormality warranting investigation. The persistence of eosinophilia after an acid-suppressing trial for eight weeks (typically, a proton pump inhibitor) further supports the diagnosis of EoE.

Epidemiological studies suggest that EoE has a higher prevalence in young white males and that the condition occurs in individuals with at least one allergic condition. Food allergies and other aberrant immune responses are strongly suspected in the pathogenesis of the disorder.

At Penn Medicine, the immediate objectives for EoE treatment are symptom relief and resolution of esophageal eosinophilia. The long-term goal is to avoid the risk of esophageal remodeling and stricture formation. Once EoE has been confirmed, treatment plans are developed by gastroenterologists (in collaboration with an allergist, if appropriate) and individualized for each patient.

Therapy is typically initiated by swallowing topical steroids to control inflammation and suppress eosinophilic infiltration. As with patients with asthma and other immune-mediated disorders, EoE patients may require long-term steroid treatment.

Because EoE is mediated via the allergen pathway, food elimination diets are also a mainstay of therapy at Penn. The six food elimination diet is one promising option for dietary therapy. It involves the exclusion of the six food groups commonly associated with food allergies (dairy, eggs, nuts, wheat, fish and soy). Over time, each food may be slowly reintroduced in an attempt to discover which ones are causing the allergic reaction. Alternatively, the identification of the provoking allergen via skin-prick or patch testing and targeted dietary management may also be part of the treatment algorithm. Repeat biopsies and endoscopic examinations are necessary to assess for histologic remission.

Endoscopic examinations may also provide therapeutic esophageal dilations in patients who develop strictures.
**FACULTY TEAM**

The Penn Medicine Center for Esophageal and Swallowing Disorders is staffed by specialists from the renowned Penn Division of Gastroenterology who work closely with allergists, radiologists and pathologists to offer a coordinated and comprehensive approach to the evaluation and treatment of esophageal disorders. Many Penn gastroenterologists are actively involved in clinical research, pioneering advances within their fields to bring more options to the detection and management of various esophageal diseases, including achalasia, eosinophilic esophagitis, esophageal strictures and GERD.

- **Treating Esophageal and Swallowing Disorders at Penn Medicine**
  - Gary W. Falk, MD, MS
    - Co-Director, Esophagology and Swallowing Center
    - Professor of Medicine
  - Kristle L. Lynch, MD
    - Assistant Professor of Medicine
  - David C. Metz, MD
    - Co-Director, Esophagology and Swallowing Program
    - Professor of Medicine
  - Yu-Xiao Yang, MD, MSCE
    - Associate Professor of Medicine

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**Gastroenterology**

**Perelman Center for Advanced Medicine**

South Pavilion, 4th Floor
3400 Civic Center Boulevard
Philadelphia, PA 19104