

Clinicopathological dissociation in isolated esophageal eosinophilia

To the Editor,

Eosinophilic esophagitis (EoE) and gastro-esophageal reflux diseases (GERDs) are the two major causes of isolated esophageal eosinophilia (1), which may be proton pump inhibitor (PPI)-responsive or PPI-nonresponsive. PPI-nonresponsive esophageal eosinophilia is considered EoE, whereas GERDs are considered part of the PPI-responsive esophageal eosinophilia (PPIREE) group. However, there is a subgroup of PPIREE that is not considered GERD or EoE (PPIREE: non-GERD, non-EoE) (2). To determine PPIREE, a high therapeutic dose is used (2-4), although the clinical and pathological symptoms of EoE do not respond to PPI treatment. Unfortunately, it is not always easy to reach a differential diagnosis in clinical practice, as the pathological findings may not change after PPI treatment, despite the disappearance of the clinical symptoms. Therefore, this clinicopathological dissociation creates uncertainty regarding patient classification and the indication for treatment.

We diagnosed two children who were recently admitted to our clinic with symptoms of reflux esophagitis and food impaction. Both children had dense eosinophilic infiltration of the esophageal mucosa, before and after the high-dose PPI treatment, which met the criteria for a diagnosis of esophageal eosinophilia (≥ 15 cells per high-power field) (3,4). In contrast, the clinical symptoms resolved completely in both the children after the high-dose PPI treatment. The resolution of the clinical symptoms after PPI treatment suggested a diagnosis of PPIREE (either GERD or PPIREE: non-GERD, non-EoE), whereas the continued esophageal eosinophilia pathology suggested a diagnosis of EoE.

There are two possible explanations to this discrepancy. First, GERD may have caused the symptoms, while also increasing the fragility of the mucosa and disrupt-

ing the integrity of the mucosal lining, subsequently leading to eosinophilic infiltration (5). Therefore, acid suppression by using PPI treatment may have resolved the symptoms due to the vulnerable mucosa before the resolution of the eosinophilic infiltration. Second, EoE and GERD may be co-morbid diseases (2), with GERD exacerbating the patient's clinical condition, leading to earlier emergence of esophageal dysfunction symptoms. Whichever scenario is correct, the symptomatic improvement after high-dose PPI treatment is of concern. To the best of our knowledge, the long-term prognosis for asymptomatic esophageal eosinophilia remains unknown. Therefore, further therapy with PPIs or corticosteroids cannot be recommended at this point, as there is not enough evidence. To make a differential diagnosis that clearly identifies the PPIREE subgroup, it is important to understand the pathogenic mechanism(s) in EoE and assess the long-term sustainability of the response to PPI. Therefore, close monitoring of these patients is strongly recommended.

Conflict of Interest: No conflict of interest was declared by the authors.

Özlem Yılmaz¹, Hacer İlbilge Ertoy Karagöl¹, Erdem Topal¹, Aysel Ünlüsoy Aksu², Ödül Eğritaş², İpek Işık Gönül³, Arzu Bakırtaş¹

¹Department of Pediatric Allergy and Asthma, Gazi University Faculty of Medicine, Ankara, Turkey

²Department of Pediatric Gastroenterology, Gazi University Faculty of Medicine, Ankara, Turkey

³Department of Pathology, Gazi University Faculty of Medicine, Ankara, Turkey

REFERENCES

1. Dellon ES, Gonsalves N, Hirano I, Furuta GT, Liacouras CA, Katzka DA. ACG clinical guideline: Evidenced based approach to the diagnosis and management of esophageal eosinophilia and eosinophilic esophagitis (EoE). *Am J Gastroenterol* 2013; 108: 679-92.
2. Hirano I. Editorial: Should patients with suspected eosinophilic esophagitis undergo a therapeutic trial

Address for Correspondence: Özlem Yılmaz, Department of Pediatric Allergy and Asthma, Gazi University Faculty of Medicine, Ankara, Turkey
E-mail: drozlemyilmaz09@gmail.com

Received: October 14, 2013 **Accepted:** November 10, 2013

© Copyright 2014 by The Turkish Society of Gastroenterology • Available online at www.turkjgastroenterol.org • DOI: 10.5152/tjg.2014.6326

- of proton pump inhibition? *Am J Gastroenterol* 2013; 108: 373-5.
3. Furuta GT, Liacouras CA, Collins MH, et al. First International Gastrointestinal Eosinophil Research Symposium (FIGERS) Subcommittees. Eosinophilic esophagitis in children and adults: a systematic review and consensus recommendations for diagnosis and treatment. *Gastroenterology* 2007; 133: 1342-63.
 4. Liacouras CA, Furuta GT, Hirano I, et al. Eosinophilic esophagitis: updated consensus recommendations for children and adults. *J Allergy Clin Immunol* 2011; 128:3-20.
 5. Tobey NA, Hosseini SS, Argote CM, Dobrucali AM, Awayda MS, Orlando RC. Dilated intercellular spaces and shunt permeability in nonerosive acid-damaged esophageal epithelium. *Am J Gastroenterol* 2004; 114: 2774-82.