Letters to the Editor

Could be possible to predict eosinophil accumulation in esophageal mucosa in eosinophilic esophagitis without perform endoscopic examination?

Key words: Eosinophilic esophagitis. Eosinophils. Endoscopy.

Dear Editor,

Eosinophilic esophagitis (EE) is a recently recognized but expanding disorder characterized by antigen-driven eosinophil accumulation in the esophagus, meanwhile all other segments of the gastrointestinal tract are normal. Patients typically have recurrent dysphagia and food impactions, and they have evidence of food and aeroallergen hypersensitivity.

The esophagus is normally devoid of eosinophils (Eo), so the finding of esophageal eosinophilia denotes pathology. However, the mere presence of esophageal eosinophils is not specific for a particular disorder because eosinophil accumulation in the esophagus occurs in a variety of states; so, the diagnosis of EE requires elimination of other causes of esophagitis (1).

Our work aims to evaluate the possible relationship between the serological levels Eo and IgE and the concentration of Eo on histology. We carried out a retrospective observational study analyzing nine adult patients diagnosed between January 2007 to May 2009 in the Hospital Alto Guadalquivir de Andújar (Jaén, Spain). EE was considered, the presence of more than 20 eosinophils per high power field x 400 (Eo CGA) and eosinophilia in the presence of more than 4% of blood Eo. We excluded the involvement of other sections of the digestive tract by taking

biopsies of the stomach and duodenum. Informed consent was obtained from all patients to perform endoscopic examinations.

Results

Nine cases of EE were male (2 of them siblings), aged between 17 and 54 years (average 35.33). In 100% was peripheral eosinophilia (EOP) (mean = 6.77 ± 1.4) and elevated IgE [median 314 (59-1035)]. Histologically, the average number of Eo CGA was 47.56 ± 23.25 and Eo was 237.78 ± 116 per mm². Linear correlation between blood levels of Eo and IgE with Eo was found on histology (Pearson correlation 0.67 and 0.84 respectively with $p < 0.05$) (Fig. 1).

Discussion

The pathophysiological mechanisms of EE are not rinsed, but it seems to be an inflammatory process immunoallergic etiology determined by a possible hypersensitivity reaction to certain dietary components or aeroalérgenos (1-3). In 100% of our patients showed eosinophilia, coincident discovery with another recently published series of patients from Andalucía, Spain (4). However, literature describes much lower rates of eosinophilia in adults (10-50%) (1). This could be explained because it would have greater incidence of immunoallergic phenomena in our region, or perhaps motivated by a selection bias. For the pathological diagnosis of EE, should take at least three esophageal biopsies, considering the disease when it can be seen at least 15 Eo CGA (x400) (4). We decided to use to diagnose at least 20 Eo CGA in order to increase specificity.

In this study we demonstrated the existence of a positive linear correlation between Eo and IgE levels in peripheral blood, with the permeation of Eo in the esophageal mucosa. The authors have not found in the literature any study that evaluates the likely correlation. So, these results should be proved in future prospective studies designed for this purpose, with greater sample size, in order to avoid bias.

Fig. 1. Linear correlation between the levels of blood eosinophils and IgE with the eosinophils forms in the histology.

In conclusion, it is likely that there is a linear correlation between Eo and IgE levels in serum, with the concentration of eosinophils in the esophageal mucosa. This could be helpful for monitoring these patients.

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