

Eosinophilic Esophagitis Onset Despite Six Years' Treatment With Omalizumab in an Asthmatic Patient: No Protective Effect for Anti-IgE Therapy?

Laura Franceschini, MD^{1,2},
Raffaele Macchiarelli, MD¹, Ivano Biviano, MD¹
and Alessandro Farsi, MD²

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Eosinophilic esophagitis (EoE) is a chronic T-helper (Th)2-mediated inflammatory disorder of the esophagus, frequently associated with allergic diseases, such as food allergy, allergic rhinitis, type-2 asthma, and atopic dermatitis (1).

Current valid therapeutic options (dietary therapy, proton pump inhibitors, and swallowed topic steroids) present some limitations; therefore, new drugs such as monoclonal antibodies, which are already used in other Th2-mediated conditions with natural history modifying effect, are being proposed (2).

In particular, omalizumab is a recombinant monoclonal antibody that selectively binds to human Immunoglobulin E (IgE), to date approved for treatment of severe allergic asthma and chronic spontaneous urticaria (3).

We report the case of a 36-year-old asthmatic female patient who developed EoE despite ongoing treatment with omalizumab started 6 years before. The patient was referred to our gastroenterology unit with a 5-month history of dysphagia for solid food, sensation of food impaction resolved with ingestion of liquids, epigastralgia, and weight loss. An upper endoscopy examination showed, according to endoscopic reference score, white exudates, longitudinal furrows, and edema, all suggestive for EoE. Histologic examination of biopsy specimens obtained from proximal, medium, and distal esophagus revealed marked infiltration of 40 eosinophils/high power field, confirming the diagnosis of EoE. Thus, therapy with proton pump inhibitors was started and a new upper endoscopy was planned after a 8-week treatment. Moreover, an allergological evaluation, including skin prick tests and specific serum IgE, found the presence of sensitization to aeroallergens (grass and tree pollen, dust mites and alternaria spores), but not to food allergens. Total serum IgE level was 732 kU/L.

Patient medical history included a diagnosis of severe asthma, poor controlled by combination therapy with high-dose inhaled steroids plus long-acting beta2-agonists and tiotropium bromide. Therefore, in 2014, omalizumab (450 mg by subcutaneous injection every 2 weeks) was started, according to the reference nomogram for body weight and total IgE level. Over the next 12 months, given the clinical and functional improvement, the inhalation therapy was gradually reduced by Pulmonologist until only omalizumab was continued.

This case is, to the best of our knowledge, the first describing unsuccessful protective effect of anti-IgE therapy, which was maintained for years, on development of EoE in a patient with allergic asthma. To date, clinical trials and case reports seem to indicate that therapy with omalizumab is not effective in inducing remission of ongoing EoE (1,2,4). Nevertheless, nothing is known about the potential modifying effect or protective role of omalizumab, as well as of other biologics used for different Th2-mediated disorders, on the natural history of this disease.

EoE patients are not a homogeneous population: Differences in onset, clinical manifestations, comorbidities, natural history, biomarkers, and response to treatment exist. In the era of precision medicine, recognizing these specific phenotype/endotype subsets could be the basis to understand the heterogeneity of patient responsiveness to treatments and the opportunity for a personalized therapeutic approach (5).

Translating into clinical practice, an ongoing and successful treatment of one specific Th2-high condition with omalizumab or other biologics cannot exclude, so far, the outbreak of another Th2-related disease.

CONFLICTS OF INTEREST

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¹UOC Gastroenterology and Operative Endoscopy, Hospital Santa Maria alle Scotte, Siena, Italy; ²SOS Allergy and Clinical Immunology, USL Toscana Centro, Prato, Italy.
Correspondence: Alessandro Farsi, MD. E-mail: alessandro.farsi@uslcentro.toscana.it.