

Allergic mechanisms of Eosinophilic oesophagitis

The concept of eosinophilic oesophagitis (EoE) as a food allergy seems foreign to many patients, and even physicians, since EoE does not exhibit the typical symptoms associated with allergic reactions such as hives, swelling, pruritus, wheezing or anaphylaxis. Instead, it affects only the esophagus and causes symptoms such as swallowing difficulty (especially solid foods), food impaction, refractory reflux symptoms, pain and feeding problems.

We normally do not experience allergic reactions with food because there is a mechanism in our immune system that prevents hypersensitivity reaction to foods (a.k.a. oral tolerance). In patients with EoE, trigger food proteins circumvents the oral tolerance mechanism, and causes inflammation in the esophagus. The inflammation is predominantly driven by a specific type of white blood cells known as eosinophils, hence the name eosinophilic oesophagitis. Eosinophils are recruited to the esophagus through a complex network of signaling molecules and mediators. In our review paper, we summarize the important lessons learned from animal and human studies, and dissected the roles of the key inflammatory mediators. Based on current evidence, we proposed the allergic mechanism of EoE.

Publication

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