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【 LETTERS TO THE EDITOR 】

Food-specific IgG Antibodies in Crohn's Disease: What Came First, the Chicken or the Egg?

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To the Editor We read the paper by Xiao et al. with keen interest. The authors investigated the clinical relevance of immunoglobulin G (IgG)-mediated "food allergy" in the pathogenesis of inflammatory bowel disease (IBD) and found that certain food antigen-specific IgG class antibodies were highly elevated in the sera of Crohn's disease (CD) patients (1).

Food allergies may be classified as immunoglobulin E (IgE)-mediated (immediate) reactions, non-IgE-mediated (delayed) hypersensitivity and mixed reactions. Beyond the IgE responses, there are other possible adverse reactions to food (i.e. lactase deficiency). These are termed "food intolerances", although they are not immune reactions by definition. The current gold-standard for diagnosing food allergy is the elimination of the suspicious food antigen followed by its reintroduction (challenge) (2). IgG testing is neither recommended nor has been proven in diagnostic practice. Test results should not be used to advise dietary modification or food elimination. IgG antibodies against food antigens are frequently detected in healthy persons, independently from food-related symptoms. Numerous studies have shown that the production of food-specific IgG is the natural, physiologic response to regularly ingested foods (3). They therefore simply indicate that the person has previously been exposed to that food.

This paper raises the question of what came first, the chicken or the egg? Do the mucosal inflammation (IBD) and intestinal barrier dysfunction ("leaky gut") preceed the elevation of these IgG-type antibodies, or is it the other way around?

CD patients have often shown an intense immune response to food antigens, generating both IgE- and IgG-type antibodies. The number of IgG-positive food items may serve as a potential diagnostic marker of CD (and related GI-mucosal damage). A diet guided by food antibody tests might aid in disease control and encourage remission (4).

Studies on another type of immune-mediated gastrointestinal disease (eosinophilic esophagitis) found that, in the absence of any IgE or IgG antibody testing for food antigens, an empiric elimination diet excluding six food groups (cereals, including wheat, rice, and corn; milk and dairy products; eggs; fish; seafood; and legumes, peanuts, and soy) is an effective and sustainable non-pharmacological dietary treatment option for patients (5).

In our opinion, it is unfortunate to use definitions improperly or arbitrarily as synonyms. However, increased levels of IgG-type food-specific antibodies might indicate an increased mucosal permeability to luminal contents (leaky gut). Investigating the introduction of the Six-Food Elimination Diet in CD patients may therefore be suitable, as it might help ameliorate conditions such as eosinophilic esophagitis.

The authors state that they have no Conflict of Interest (COI).

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