

## EDITORIAL

### Food allergy and plausible dietary interventions

Food allergies are emerging as a significant and growing public health problem worldwide. The management of food allergens in food production and the accurate diagnosis of allergic conditions remain major challenges across health systems. The threshold dose required to trigger an allergic reaction varies considerably among individuals. Globally, the prevalence of food allergy is increasing and is estimated to affect approximately 2–4% of both children and adults. Although more than 170 different foods have been identified as potential allergens, nine major foods and their derived products account for over 90% of reported cases. These include milk, eggs, peanuts, tree nuts, fish, shellfish, wheat, soy, and sesame.

This is an exciting era in the field of food allergy, characterized by a proactive approach and the emergence of novel therapies aimed at optimizing the management of an increasing number of affected individuals. Adverse reactions to food (ARF) encompass both food allergy (FA) and food intolerance. Food allergy is defined as an aberrant immunological response to food antigens and may arise from IgE-mediated, non-IgE-mediated, or mixed mechanisms.

The clinical features experienced by patients following the ingestion of a specific food are central to the diagnosis of food allergy. Classically, IgE-mediated food allergy may give rise to a wide spectrum of manifestations, ranging from mild to life-threatening reactions. These include cough, chest tightness, wheezing, urticaria, nausea, vomiting, diarrhoea, bloating, dermatitis, angioedema, and anaphylaxis. Notably, nearly 50% of patients with food allergy present with gastrointestinal tract (GIT) symptoms, with immediate vomiting being the most common feature in IgE-mediated reactions.

Diagnosis of food allergy remains challenging, as clinical features are often non-specific and establishing a clear causal relationship between the allergen and the reaction is difficult. Both the European Academy of Allergy and Clinical Immunology (EAACI) and the Global Allergy and Asthma European Network (GALEN) provide evidence-based guidelines for the management of IgE-mediated food allergy. These guidelines emphasize dietary interventions, allergen immunotherapy, and the use of biological therapies.

EAACI recommends avoidance of the specific food (or the particular form of the food) to which the patient is allergic, supported by age-appropriate, individualized dietary advice under the guidance of a trained dietician. However, complete avoidance of an entire food group is not advisable, for example, avoiding all nuts in a patient with a peanut allergy. Instead, consumption of foods to which the patient is sensitized but clinically tolerant is encouraged, while minimizing accidental exposure to the triggering allergen. This strategy helps ensure dietary diversity across all age groups and physiological states, reduces the adverse effects of unnecessary food restriction, supports psychological well-being, improves quality of life, and prevents nutritional deficiencies that may impair growth and development, particularly in children.

All individuals with confirmed IgE-mediated food allergy should receive clear, age-appropriate oral or written advice specific to the identified food triggers that must be avoided. Individualized dietary counselling should consider the availability of alternative traditional foods, cultural and religious practices, socioeconomic status, and personal dietary patterns (e.g., vegan or lacto-ovo-vegetarian). Careful nutritional assessment and growth monitoring are essential, especially in children, to detect and manage the potential consequences of dietary restriction.

According to GALEN guidelines, breastfeeding mothers of infants with food allergy do not need to eliminate the offending food from their own diet. For infants requiring breast milk substitutes, both EAACI and GALEN recommend extensively hydrolyzed cow's milk formula (casein or whey) or hydrolyzed rice formula as first-line options, and amino acid-based formulas as second-line alternatives. However, these guidelines do not provide strong recommendations for or against the use of prebiotics, probiotics, synbiotics, or hydrolyzed plant-based formulas in the management of food allergy.

Current management strategies highlight several good clinical practices to optimize outcomes. Structured education of patients and their families on the recognition and management of food allergy, including emergency response, is essential. Such education should be delivered using motivational and behavioral principles to build self-confidence without generating undue anxiety. Importantly, avoidance strategies should be carefully designed so as not to unnecessarily compromise the patient's quality of life.

In addition, effective risk management and transition strategies are particularly important for adolescents and young adults, as this group is at higher risk of severe reactions. Optimal control of comorbid asthma in individuals with food allergy is also crucial, as poor asthma control is associated with increased morbidity and mortality. Finally, assessing the severity of previous allergic reactions and the triggering dose may help estimate the risk of anaphylaxis, although a strong and consistent predictive relationship has not yet been established. One of the articles in this issue has elaborated on the local context of the effect of food allergy among young adults, filling the knowledge gap.

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