

## EDITORIAL

### CONTROVERSIES IN FOOD ALLERGY

*Some people complain of intolerance to specific foods that provoke symptoms of diverse severity, with highly varied organic localizations, which can be gastrointestinal, cutaneous, respiratory, and even nervous, such as headache and tiredness. Due to lack of knowledge, these patients not infrequently say they have an "allergy" to a specific food when they associate their symptoms with a particular foodstuff. Physicians should never take the patient's opinion at face value. Rather, they should investigate the possibility of other diagnoses and that more than one food could be involved in producing the symptoms. Physicians should bear in mind the wide variety of foods and the diversity of culinary preparations, including the mixture of the various components, foods or flavorings, which are cooked at different temperatures, all of which will affect their composition. Therefore, the same food does not always act in the same way, depending on its chemical structure. In addition, substances can be added to both vegetables and animal produce and variations can be introduced into their composition; examples include transgenic food, herbicide residues, fraudulent and non-fraudulent animal feeding, etc.*

*Allergic reactions have well defined clinical characteristics. Because they are syndromic, it is essential to ensure that symptoms are produced by a hypersensitivity mechanism, that is, an allergy. The most frequent reactions causing allergy are acute or chronic urticaria, atopic dermatitis and other cutaneous responses, respiratory disease, rhinitis or asthma, and anaphylactic shock, and their correlation with intake of a particular food provides the best guide to diagnostic tests (skin prick tests, specific IgE determination, oral challenge). However, sometimes neither the clinical findings nor the diagnostic tests are clear and it is here that the controversy begins. These controversies involve the terminology proposed by the European Academy of Allergology and Clinical Immunology (EAACI) for the distinct reactions caused by food<sup>1,2</sup> and the diversity of the criteria used by authors when identifying atypical reactions as pseudo-allergy, false allergy, intolerance or idiosyncratic.*

*False allergies (pseudo-allergy) can consist of reactions that are non-IgE mediated. Histamine release from mast cells in immediate hypersensitivity (type 1) reactions is the immediate cause of allergic symptoms. However, some foods contain histamine or can release it directly from mast cells<sup>3</sup>. Tyramine, which is contained in various foods or pro-*

duced during digestion, can also cause pseudo-allergic reactions. To a greater or lesser extent, food additives and alcoholic drinks have also been suggested to be involved in allergic or pseudo-allergic reactions<sup>4-6</sup>. Equally, deficiency of some digestive enzymes, especially lactase, can cause reactions mimicking allergy.

An example of a reaction to foods due to immunological mechanisms in which IgE antibodies do not predominate is the recently reported and controversial Heiner's syndrome, which is caused by direct sensitization of the tracheobronchial tree due to aspiration of milk in infants<sup>7</sup>.

Neurological manifestations are among the best studied of atypical clinical findings. The most notable of these are tension-fatigue syndrome, migraine and hyperkinesia, which have given rise to highly restrictive diets (Feingold) without demonstration of the causative role of foodstuffs<sup>8</sup>.

Various diagnostic methods have been used for these pseudo-allergic processes, such as provocation and subcutaneous and sublingual neutralization testing, electroacupuncture, and bioresonance, which lack any real diagnostic value. IgG4 and IgA-S are produced specifically on contact with foods and are a defense against them. Therefore they are not markers of hypersensitivity that can be used as an alternative to specific IgE, and hence do not have diagnostic value, unlike the claims made for them. Other laboratory tests have also been tried, such as the lymphoblastic transformation test and intestinal permeability assessment, whose diagnostic value is strongly debated<sup>9-11</sup>. Other methods ("Cytotoxic testing: ALCAT," "Food allergy profile") aim to determine individual tolerance to diverse foods, without clearly demonstrated criteria<sup>12</sup>.

Lastly, when the causative role of a foodstuff in producing the allergic reaction has been demonstrated, appropriate therapy consists of its elimination from the diet, as well as exclusion of any foodstuffs producing cross reactions, as is the case of profilin-containing fruits<sup>13</sup>. In the case of allergy to cow's milk proteins, appropriate therapy in infants consists of feeding with casein or serum protein hydrolysate formulae, or soy-based or elemental formulae<sup>1</sup>. Sublingual or oral immunotherapy has been tested on several occasions but without clear results, although further testing is underway<sup>14</sup>. There is no scientific rationale for highly restrictive diets, the salicylate and additive-free Feingold diet for hyperkinetic children, or alternative medicines (acupuncture, homeopathy, traditional Chinese medicine, based on herbs), which are not supported by scientific evidence.

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