

EDITORIAL

Year : 2013 | Volume : 27 | Issue : 2 | Page : 93-94

Food allergy or food intolerance...?

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How to cite this article:

Gaur S N, Kumar R. Food allergy or food intolerance...?. Indian J Allergy Asthma Immunol 2013;27:93-94

How to cite this URL:

Gaur S N, Kumar R. Food allergy or food intolerance...?. Indian J Allergy Asthma Immunol [serial online] 2013 [cited 2014 Jan 9];27:93-94

Available from: <http://www.ijaai.in/text.asp?2013/27/2/93/124388>

Full Text

A food allergy is an adverse immune response of the body to an otherwise innocuous substance present in certain foods. It is usually mediated by immunoglobulin E (IgE). The clinical symptoms may include skin (urticaria and eczema), gastrointestinal system (nausea, vomiting, diarrhea, and pain), respiratory system including upper (sneezing and rhinorrhea), or lower airway (asthma). Rarely, it may lead to anaphylaxis, cardiovascular collapse, and sudden death. Recent estimates have suggested that IgE-mediated food allergy affects 6-8% children and 3-4% adults. [1] In assessing a patient with suspected food allergy a thorough history and physical examination is required to generate a broad differential of food items which may be the culprit. This is followed by a battery of tests which may include skin prick tests, measurement of food specific IgE, oral food challenges, and double-blinded placebo-controlled food challenge. In a study, food allergy to one or more food (s), as elicited by positive skin prick test in patients with history suggestive of food allergy, was found in 30% of the subjects. Individually, allergic reaction was found to occur most commonly with rice (6.2%) cases followed by black gram (5.9%), lentil (5.5%), citrus fruits (5.3%), pea (3.8%), maize (3.8%), and banana (3.6%). [2],[3] Legumes are important causative agents of type I hypersensitivity in south Asia and Europe, but such studies are lacking in Indian population. A study [4] investigated black gram sensitization in asthma and rhinitis patients and identifies IgE-binding proteins. Black gram induces IgE-mediated reactions in 1.7% of asthma and rhinitis patients and contains eight major IgE-binding components, of which six regained IgE reactivity after roasting. Black gram shares allergenicity with lentil and lima bean. A case [5] with definite history of allergy (asthma) was investigated using standard in vivo and in vitro tests. Double-blind oral challenge test with dehusked horse gram (pulses) showed severe pulmonary obstruction. A study [6] was carried out to identify rice allergy in patients of rhinitis and asthma and to identify the allergenic proteins in raw and cooked rice. Of these, 20 (12.1%) patients demonstrated marked positive skin prick test (SPT) and 13 showed significantly raised specific IgE to rice compared to normal controls. Double-blind, placebo-controlled food challenge (DBPCFC) confirmed rice allergy in 6/10 patients. Immunoblot with hypersensitive individual patients' sera showed 14-16, 33, 56, and 60 kDa proteins as major IgE-binding components in rice. Studies suggest the importance of serum total and specific IgE in clinical evaluation of allergic manifestations. Such studies are lacking in Indian subcontinent, though a large population suffer from bronchial asthma. In a study [6],[7] the relevance of serum total and specific IgE was investigated in asthmatics with food sensitization. At present, the management of food allergies involves educating the patient regarding avoidance of responsible allergen and in cases of anaphylaxis from unintended ingestion, resuscitation with epinephrine. The role of

immunotherapy in food allergy is currently being explored. [8]

On the other hand nonallergic food hypersensitivity also referred to as food intolerance is an adverse reaction to food in which there is no evidence that the defense (immune) system is involved. Intolerance to food can result from enzyme defects (e.g., lactase deficiency), presence of pharmacological active agents like histamine and tyramine (e.g., caffeine), direct irritant effect (e.g., spicy foods), or from toxins (e.g., hemagglutinating lectins) present in food. [9] Usually the symptoms are of more chronic nature and may include skin (rashes, urticaria, dermatitis, and eczema), respiratory tract (nasal congestion, sinusitis, and asthma), gastrointestinal tract (abdominal cramp, nausea, diarrhea, constipation, and irritable bowel syndrome). The gold standard method for diagnosing food intolerance is double-blind, placebo-controlled food control tests. [10] The test is laborious and it is difficult to test all combinations of food types that may be causing symptoms. On the other hand, studies have shown evidence for the use of food specific IgG levels as a guide for identification of food intolerance. These studies have shown that presence of food specific IgG may indicate a potential sensitivity and eliminating the corresponding food item from diet may be beneficial to the patient's clinical status. [11]

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Thursday, January 09, 2014

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