BASED ON THE SENSITIZATION PROPERTIES OF FOOD ALLERGENS

Tashmamatov Bakhtiyor Norbekovich, Korzhavov Sherali Oblakulovich, Sayfullaeva Marjona Khairullo kizi

Samarkand State Medical University, Samarkand, Uzbekistan

Abstract. Food allergy is an immune reaction of the body to components included in some products. Usually children, especially breastfed babies suffer from this disease. Food allergies are less common in adults. The dangerous side of allergy is that even a small amount of allergen can endanger human life. In case of food allergy, new products that are absolutely harmless to other people can have a negative effect on someone. Usually they appear on the skin, less often in the digestive system. In case of severe allergy, the patient may experience anaphylactic shock, which is extremely life-threatening, and what is noteworthy is that this type of reaction is less common in food allergy.

Key words: food allergy, children, allergens, digestion, medicine.

The urgency of the problem. Hidden allergens in food products are one of the current problems, and information about their sources can serve to ensure safety for patients with allergic diseases.

Food sensitivities are considered one of the most important problems in the health system in many countries. Food allergies are common in children and are triggered by allergens such as cow's milk, eggs, soy, fish, peanuts, tree nuts and gluten. One of the best treatment strategies is to adhere to a diet and limit the consumption of products that cause the symptoms of the disease [4]. The fact that the ingredients are not required to be displayed on the packaging of the products creates problems and allows the allergen to be hidden in the food product. Because food production practices in different countries are fundamentally different. For patients with food sensitivities, knowledge of hidden allergen sources may prevent unpleasant allergic symptoms in the future [1,3]. Food products can be contaminated during processing, for example, literature sources provide information on the fact that groundnut can be found in products and pastries that do not preserve it when used [2].

The purpose of the investigation is to substantiate the sensitizing properties of food products.

Inspection material and methods . In patients suffering from allergic diseases (bronchial asthma, allergic rhinitis, atopic dermatitis, food allergy) (n=334) using German R-Biopharm allergen panels, immunoglobulin E (IgE) specific antibodies to food allergens in the blood serum of patients were determined using the immunoblot method.

Obtained results and analysis . This method has a number of advantages, that is, it can be used at any age, even in infants, lactating women, pregnant women, at the time of the onset of the disease, and during the treatment of patients. It became possible to determine sensitivity to dozens of allergens at the same time and to approach individual dietary treatment for each patient. Currently, food allergy and other allergic diseases in patients are detected early in the in vitro method, safe for the patient, with the help of these allergen panels in the Republican Scientific and Practical Center of Allergology, Tashkent city and regional clinics. In clinical practice, the diagnosis of food allergy is mainly based on clinical symptoms that occur after food consumption. It should be noted that food allergy is a form of sensitivity to food and is explained by immunological mechanisms. Allergic reactions of the immediate type with the participation of IgE have a high risk of causing unpleasant allergic symptoms. It should be said that adverse reactions to food products can be studied as one of the national biosafety problems. The increasing number of new food products, genetically modified or modified products also complicates this problem. Cross-reactions of food and allergens of other groups, the formation of polysensitization lead to the occurrence of severe forms of allergic diseases.

In each country, climate characteristics, dietary habits and methods of food and product preparation are important in the origin of food allergies. For example, in the USA, peanuts are considered one of the strongest allergens, and 2/3 of fatal anaphylaxis are caused by peanuts, which is why it is processed at a high temperature (150-180 ^{0}), which increases the allergenicity of the protein. Allergies to tree nuts and peanuts have tripled in the United States in recent years. In Israel, the early introduction of uncooked peanuts and sesame into the diet of young children causes a wide spread of allergies to them. During the period of dietary treatment of patients, it is good to take into account the resistance of each product to thermal processing . For example, if the allergenic properties of nuts increase during heat treatment, on the contrary, we can often reduce the allergenicity of vegetables and fruits with the help of heat treatment.

Food allergy often begins in childhood, and is characterized by the release of rapid IgE-type allergic antibodies by the body as a result of complex processes due to the functional immaturity of the digestive organs and immune system of children with a genetic predisposition. The gastrointestinal tract is exposed to many potentially allergenic proteins every day, but food hypersensitivity reactions do not occur when the immune system is functioning effectively. It should be noted that the majority of patients have metabolic disorders, changes in the enzyme system, and increased permeability of the gastrointestinal mucosa. However, as a result of the lack of timely diagnosis of food allergy and the failure to identify the "culprit" allergen, in clinical practice, in the diet treatment of patients, allergens that cause the disease and products that do not

cause the disease are restricted from the diet, as a result, the patient's growth lags behind, and respiratory symptoms are added to the skin symptoms over time.

Currently, as a result of the development of the food industry and new technologies, the wide use of plant products (adding soy and nut proteins to some sausages), the composition of the concrete product is changing. The role of plant allergens is also reflected in the EU 2005 Directive, which mainly includes products with allergenic properties, such as gluten-containing grains (wheat, oats, rye), soybeans, peanuts, nuts (almonds, cashews, pistachios, hazelnuts, etc.), celery, sesame, mustard must be marked. Genetically modified products also pose a great risk as potential allergens due to the altered protein composition. Among the common food allergens in our republic, children are mainly gluten, buckwheat, wheat flour, cow's milk, eggs, nuts (peanuts, walnuts, almonds), yogurt, lemons, strawberries; We found that adults are more sensitive to tomato, potato, honey, wheat flour, carrot, sesame, cherry, celery, orange, peach, pea, apple, strawberry, pineapple, walnut, pistachio, peanut, and cow's milk allergens.

Conclusion . Timely identification of the allergen that poses a threat to the patient, elimination of the "guilty" allergen, that is, limiting communication and consumption with it, is important in the treatment of the patient. Physicians should explain to patients that when shopping for food products, they should read each product label and read the ingredients carefully.

Literature.

1. Abdullaeva DG The New Possibilities Definitions of Latent Allergens in Food and the Role of the Syndrome of Cross-Reactivity in Food Allergy International Journal of Innovative Science and Research Technology . 2020. #6. R. 800-802.
2. Giovanni A. Zurzolo & Michael L. Mathai & Jennifer J. Koplin & Katrina J. Allen Hidden Allergens in Foods and Implications for Labeling and Clinical Care of Food Allergic Patients // Curr Allergy Asthma 2012. Rep DOI 10.1007/s11882-012-0263 -6
3. Harris A. Steinman "Hidden" allergens in foods The journal of allergy and clinical immunology volume 98 number 2. R.241-250
4. Khusanov EU, Ortikbaeva NT, Korzhavov Sh. O. Apudocytes of the pyloric part of the stomach under the action of chemical plant protection products//Achievements of science and education. - 2020. - No. 11 (65). - S. 63-66.
5. Kolacek S. Prehospital neither grun u djecjoj dobi [Food hypersensitivity in children]. Acta Med Croatian . 2011 ;65 (2):155-61. Croatian. PMID: 22359882.

6. Korzhavov Sh. O. et al. The role of Latin in medicine and in the modern world//International Scientific and Practical Conference World science. – ROST, 2017. - T. 5. – No. 6. - S. 40-42.
7. Korzhavov Sh., et al. Anthropometric and physiological characteristics of thymus gland in newborns and young children (Literature review) //Eurasian Journal of Medical and Natural Sciences. - 2022. - T. 2. - No. 6. - S. 118-130.
8. ZA Abduraimov et al. Ways to eliminate postoperative complications in ventral hernia plastic surgery in patients with concomitant obesity//science and world. - 2013. - P. 50.