WEB OF SCIENTIST: INTERNATIONAL SCIENTIFIC RESEARCH JOURNAL
ISSN: 2776-0979, Volume 3, Issue 10, Oct., 2022

CLINICAL SIGNS OF FOOD ALLERGY IN CHILDREN

Ergasheva Muharram O'ktam qizi.
Bukhara State Medical Institute

Summary
For centuries, reactions to foods have been the focus of attention for both physicians and their patients. The first indications of unusual reactions to food have been known since the time of Hippocrates (460-370 BC), who described adverse reactions to food in the form of gastrointestinal and skin symptoms in patients receiving cow's milk. Anaphylactic reactions to eggs and fish were first described in the 16th and 17th centuries. In the XX century. there was a qualitative change in the composition of the diet consumed by an ordinary person and, accordingly, “unusual” reactions to foods became ubiquitous. This was a powerful impetus for the study of food allergies. The variety of clinical manifestations, as well as the possibilities of unlimited interpretation, largely determine the difficulties in the diagnosis and treatment of food allergies.

Keywords: food allergy, Urticaria, Angioedema, Atopic dermatitis

Food allergy is a form of food intolerance, the latter being a reproducible pathological reaction to foods. The classification of food intolerance is based on the isolation of immune and non-immune forms. Food allergy is an immunologically mediated food intolerance.

It should be noted that food allergies are often overdiagnosed. Therefore, data on the prevalence of food allergies are very diverse. So, according to a number of researchers, at least 20-30% of the population is convinced that they suffer from food allergies. Whereas the prevalence of proven food allergy in developed countries among children of the first year of life is 6-8%, and in adolescence - 2-4%. Such significant differences in the assessment of the prevalence of food allergy may be the result of a variety of complaints that are interpreted as a manifestation of food allergy. Unfortunately, obviously overestimated data on the prevalence of food allergy are also presented by some experts, which is primarily due to the lack of provocative testing in the studies and the interpretation of the presence of sensitization as evidence of food allergy. Thus, the concept of food intolerance is much broader than food allergy. Thus, food intolerance can be the result of the chemical properties of foods (for example, headache from tyramine in old cheeses, tremor from caffeine in coffee), the result of a toxic reaction when eating a large amount of a certain product, etc. Often, an enzyme

deficiency (lactase deficiency) or idiosyncrasy is taken for a food allergy. It should be noted that a combination of enzyme deficiency and food allergy is possible.[2.4]

The specific significance of food allergy is different for specific nosological forms. Thus, among children with moderate and severe atopic dermatitis (AD), the prevalence of food allergy is 37-50%, acute urticaria - 50-90%, chronic urticaria - 2-5%, bronchial asthma / allergic rhinitis - 5%. There are a number of diseases in which the role of food allergy is suspected and discussed by a number of authors. In particular, this applies to chronic fatigue syndrome, irritable bowel syndrome, migraine, neuropathy, serous otitis media, vasculitis, arthritis, etc. However, in these conditions, the significance of food allergy has not been proven, and at present it does not seem appropriate to carry out diagnostic measures to identify hypersensitivity to food allergens in these categories of patients.[6.7]

Depending on the “shock” organ, food allergy can manifest itself with various diseases.

Urticaria is a disease manifested by transient rashes, the morphological element of which is a blister - a clearly defined area of edema of the dermis. The color of the blisters varies from light pink to bright red, sizes from 1-2 mm to several centimeters. This is a clearly localized area of edema of the dermis and subcutaneous tissue. The rashes usually disappear within 24 hours and leave no traces behind.

Angioedema (Quincke's edema) is a clearly localized area of edema of the dermis and subcutaneous tissue. The rashes usually disappear within 24 hours and leave no traces behind.

In the vast majority of cases, acute urticaria/angioedema in young children is caused by foods (milk, fish, crabs, legumes, nuts, peanuts, eggs, etc.). Various fruits and vegetables can also cause hives. A number of foods (eggs, fish, cow's milk, etc.) are known to cause urticaria on contact with intact skin in sensitized patients. Quite often there is contact hypersensitivity to cow's milk, in particular to proteins - lactoglobulin and casein, which manifests itself in the form of recurrent urticaria. The differential diagnosis of skin reactions induced by local contact or systemic absorption is particularly difficult in young children who come into contact with foodstuffs at different body sites.

Chronic urticaria in children is rarely associated with food hypersensitivity, however, in children suffering from other allergic diseases, it is advisable to carry out allergy diagnostics.

Atopic dermatitis (AD) is a widespread disease in children, the pathogenetic basis of the clinical manifestations of which is chronic allergic inflammation of the skin caused by exposure to various allergens on the child's sensitized body.

AD is characterized by many clinical manifestations that occur only in some patients. The key symptom of AD is itching. However, it is difficult to describe the clinical picture of AD. First of all, this is due to the possibility of different localization of skin lesions (flexor, extensor surface, generalized forms).

Clinical manifestations of AD and their localization significantly depend on the age of the patients, which is the main characteristic and distinguishing feature of this dermatosis, which is not characteristic of other eczematous and lichenoid skin diseases. More than 2/3 of patients with AD begin in the 1st year of life, and approximately 85% develop before the age of 5 years. In children under 2-3 years of age, AD is most often manifested by hyperemia, microvesicles on hyperemic and edematous skin. Separate parts of the body are affected: the face, with the exception of the nasolabial triangle, the outer surface of the upper and lower extremities, the ulnar and popliteal fossae, the wrists and the area of the ankle joints, the buttocks. The child is worried about severe itching of the skin.

In children aged 3-12 years, AD is manifested by redness and swelling of the skin, its thickening and intensification of the skin pattern, cracks, erosions, hemorrhagic crusts, small-lamellar and pityriasis peeling. The predominant localization is on the flexion surfaces of the limbs, neck, and wrists. In adolescents, manifestations of AD are lichenoid large, slightly shiny papules, multiple excoriations, and hemorrhagic crusts localized on the face, neck, elbows, around the wrists, and on the backs of the hands.[3.5]

An evidence-based assessment of the effectiveness of dietary therapy in AD was obtained as a result of 14 clinical studies over the period from 1975 to 2003. The study included 823 children under the age of 18 years. In 137 children, manifestations of atopic dermatitis were severe, in 142 - refractory. For 544 children, the severity and nature of manifestations were not specified. Diet therapy was found to be effective in 13 out of 14 studies, with the most effective in children in their first year of life. For children with severe or refractory manifestations of AD, diet therapy was effective in 52-80% of cases.

There are three types of AD flow. In the first case, the disease occurs in the first three months of life and after two years ends with recovery (7.4%). In the second type (31.4%), after two years of disease manifestation, a remission occurs lasting from 6 months to 3 years. In the future, the process takes on a recurring character. The third type (61.2%) is characterized by a continuously relapsing course of the disease.

Dermatitis herpetiformis is a disease that manifests as an itchy rash, usually distributed on the extensor surfaces of the extremities and buttocks. Rashes can be represented by urticaria, vesicles, papules, and in the area of the palms and soles, the

development of hemorrhagic elements is possible. The most common disease occurs in children aged 2-7 years. Dermatitis herpetiformis is associated with celiac disease and gluten hypersensitivity. So, in 75-90% of cases, celiac disease is detected, in the remaining patients, gluten-dependent hypersensitivity is subclinical and manifests itself with massive exposure to gluten. It should be emphasized that when using a diet with the elimination of gluten, the positive dynamics of the skin occurs at a later date compared to the normalization of the functioning of the intestine.[1.3.6]

Lesions of the gastrointestinal tract (GIT) take the second place among the pathologies that are associated with food allergies. Clinical manifestations of gastrointestinal diseases usually occur in combination with skin lesions and manifest as various symptoms (vomiting, nausea, pain, diarrhea). Food reactions include: celiac disease and food protein-induced enterocolitis, proctitis, proctocolitis, enteropathy. Immediate hypersensitivity reactions in the gastrointestinal tract can occur at any age and develop from a few minutes to two hours after ingestion of the product. Timing is key to diagnosis. The most pronounced symptoms include: vomiting, nausea, colic, abdominal pain, diarrhea. A combination of skin and gastrointestinal symptoms associated with atopic hypersensitivity appears to be characteristic.[1.3]

Vomiting is the most prominent manifestation, but it may be less pronounced with prolonged exposure to the allergen. In this case, the leading symptoms are: loss of appetite, weight loss, abdominal pain. It should be noted a syndrome that includes a combination of constipation and sensitization to cow's milk. Constipation is relieved after the abolition of dairy products.

Quite often, allergy to cow's milk proteins is combined with lactase deficiency, which leads to difficulties in differential diagnosis and treatment.

Oral allergy syndrome can affect both children and adults. In children, the disease is mainly associated with allergens of chicken eggs, fish, nuts, legumes. In adults, along with the listed products, vegetables and fruits become important. Symptoms are limited to the oropharyngeal region and are manifested by itching, discomfort, angioedema of the lips, tongue, palate, which usually occur within a few minutes after contact with the relevant products and are usually short-lived.

Symptoms of enterocolitis induced by dietary proteins include vomiting and profuse diarrhea with the development of a severe shock-like state. They appear within 1-10 hours. after consumption of the respective product and disappear within 72 hours. after elimination of the allergen. The most common foods that cause enterocolitis in children of the first year of life are cow's milk and soy, while in older children - eggs, wheat, rice, corn, peas.

Food allergies are one of the causes of rectal bleeding in young children. Dietary protein-induced proctitis is found in children during the first months of life and is manifested by the appearance of blood in the feces against the background of good health. The average age of children diagnosed is approximately 60 days, but bleeding is usually observed for several weeks before a correct diagnosis is made. The most common triggers are formulas based on soy and cow's milk, while the syndrome can also develop in children who are exclusively breastfed. Elimination from the diet of soy and cow's milk leads to the disappearance of obvious bleeding within 72 hours. The duration of occult bleeding is unknown. In the case of the development of the disease against the background of hydrolyzed mixtures, a therapeutic effect is possible when using amino acid mixtures.[3.5]

Dietary protein-induced enteropathy manifests itself in young children with diarrhea, vomiting, and insufficient weight gain. Hypersensitivity to milk is most common, but may be associated with sensitization to soy, eggs, wheat, and other foods. It should be noted that most patients become tolerant to milk when they reach 1-3 years of age, there are only a few reports of the presence of this disease in older children.

Celiac disease is an enteropathy induced by the dietary protein gliadin, which is found in wheat, oats, rice, and barley. Diagnosis is documented by typical histological findings, which are offset by elimination of gliadin from the diet. Clinical symptoms include weight loss, chronic diarrhea, steatorrhea, polyfaeces, pseudoascites, progressive wasting and stunting, vitamin and mineral deficiency symptoms, etc. Oral ulcers may develop.

Eosinophilic gastroenteritis can affect patients of all ages and manifests itself in a variety of symptoms: abdominal pain, diarrhea, weight loss, melena, etc. In the biopsy of the gastric and intestinal mucosa, eosinophilic infiltration is detected, and eosinophilia in peripheral blood is also possible. It must be remembered that with a number of other lesions, eosinophils can be detected in the gastrointestinal mucosa (parasitic infections, inflammatory bowel disease). The diagnosis of eosinophilic gastroenteritis is established only after the exclusion of other diseases.[4.6]

Symptoms of eosinophilic esophagitis are similar to manifestations of gastroesophageal reflux, but do not respond to antireflux therapy. Vomiting and abdominal pain are the most common symptoms of the disease. In addition, anemia due to occult bleeding, weight loss, achalasia, dysphagia, allergic symptoms, strictures of the proximal esophagus are possible.

Respiratory diseases are detected much less frequently compared to diseases of the skin and gastrointestinal tract. The most common pathology of the respiratory system in food allergies are bronchial asthma and allergic rhinitis. Isolated nasal and

bronchial reactions to food products are quite rare, their combination with atopic lesions of the skin and gastrointestinal tract is more typical. Asthma attacks can occur with direct inhalation of an aerosol containing food allergens, and usually occur in patients with hypersensitivity to fish, seafood, and egg allergens under conditions of food preparation in a confined space. Among the wide range of foods that can induce bronchospasm, special attention is paid to peanuts, hazelnuts.

This rare disease is most often associated with hypersensitivity to cow's milk proteins, however, cases of Gainer's syndrome have been described for eating soy, eggs, and pork. After the exclusion of milk from the diet, there is a significant improvement in the condition and the disappearance of symptoms and infiltration within a week, while the improvement in the condition is so pronounced that most patients refuse to conduct a provocative test. In patients who underwent a provocative test, the symptoms of the disease appeared again. A case is described when, after a two-year exclusion of dairy products, the symptoms of the disease appeared 2 months after the start of milk consumption.

Gainer's syndrome should be considered in a child with an unexplained pulmonary infiltrate, a history of an allergic reaction, an elevated level of precipitins to cow's milk proteins, and the disappearance of symptoms with the elimination of cow's milk.[1]

Anaphylaxis is a systemic acute allergic reaction of an immediate type that develops in a sensitized organism after repeated contact of an allergen, in particular food with IgE antibodies formed after the previous allergen entry into the body, and has severe manifestations of food allergy. Most often, anaphylaxis is associated with the use of chicken eggs, cow's milk, peanuts, soy, fish, seafood (clams, crabs, lobsters, oysters), various nuts (hazel, walnuts, cashews, pistachios, almonds). Food allergy is the most common cause of anaphylaxis requiring resuscitation, accounting for approximately one third or one quarter of all cases. Anaphylaxis is a life-threatening clinical syndrome. In the United States, foods cause anaphylaxis, which is fatal in about 100 people a year. In recent decades, there has been an increase in the prevalence of food anaphylaxis, which is presumably due to an increase in sensitivity to pollen, latex, fruits, nuts, vegetables, “hidden” allergens, the widespread use of exotic foods, packaged foods, which often contain components that are not reported .[1.3]

Conclusion

Clinical manifestations of food-induced anaphylaxis include laryngeal edema, urticaria, angioedema, stridor, bronchial obstruction, dyspnea, vomiting, abdominal pain, hypotension, retrosternal pain, cardiac arrhythmia, etc. Approximately one

third of patients with food anaphylaxis have a biphasic reaction, and 1/4 of patients have prolonged symptoms (up to 3 weeks).

LITERATURE

1. Balabolkin I.I. Food allergy in children // Allergology and Immunology in Pediatrics, 2008. - No. 4 (15). - pp. 7-15.
2. Clinical immunology and allergology / ed. Yeager. - L.-M.: Medicine, 1990. - 558 p.
3. Pampura A.N. Food allergy in children: a guide for physicians. - M., 2007. – 60 p.
4. Borovik T.E., Revyakina V.A., Semenova N.N., Yatsyk G.V., Skvortsova V.A., Makarova S.G. Experience of dietary correction of allergy to cow's milk protein in children of the first year of life. children's dietology, 2005. - T. 3. - No. 1. - S. 41-47.
5. Atopic dermatitis in children, diagnosis, treatment and prevention: scientific and practical program of the Union of Pediatricians Russia. - M., 2000. - 76 p.
6. Alferov V.P., Romanyuk F.V., Proyda L.N. Food intolerance in children: a guide for physicians. - St. Petersburg, 2007. - 68 p.
7. National program for optimizing the feeding of children in the first year of life in the Russian Federation. Chapter 9 - Diet therapy and dietary prevention of food allergies. — 2008. — pp. 29-34.