

CLINICAL AND LABORATORY STUDY OF NON-Ig E - MEDIATED GASTROINTESTINAL ALLERGIC REACTION IN CHILDREN

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Abstract: *In recent years, there has been a significant increase in food allergies, which is becoming a serious problem in pediatrics. Studies show that allergic reactions in the gastrointestinal tract are observed in 25-50% of children with cow's milk allergy, which occur in a non-IgE-mediated type, therefore, the purpose of our study is the clinical course and laboratory parameters of allergic enterocolitis in young children of the gastroenterological department of the Samarkand regional Children's Multidisciplinary Medical Center. The article describes clinical signs and laboratory studies such as a coprological examination, IFA and a general blood test in 40 sick children. This syndrome is characterized by abdominal pain, bloating, loose stools with an admixture of a large amount of mucus. It is manifested in the laboratory by eosinophilia, in severe clinical cases by anemia of moderate to severe degree, lymphocytosis and leukocytosis.*

Keywords: *Food allergy, non-IgE-mediated type, cow's milk proteins, allergic gastrointestinal reaction.*

Relevance: Complaints of a violation of the gastrointestinal tract (GI tract) often lead to requests for medical help in pediatrics and diagnosis can be difficult due to a wide range of potential root causes. Moreover, food allergies, especially in the first years of life, account for a significant proportion of diseases of the gastrointestinal tract. By definition, a food allergy is a pathological reaction to food components that is based on immune mechanisms. These mechanisms include the production of specific immunoglobulins E (IgE) in IgE-mediated

allergic reactions, as well as a cellular immune response in non-IgE-mediated reactions. In some cases, reactions of a mixed type may occur, combining both mechanisms. Especially difficult to diagnose are non-IgE-mediated allergic reactions, which are manifested exclusively by gastrointestinal symptoms without skin rashes.

The aim of the study was to evaluate the clinical course and laboratory studies of non-IgE-mediated allergic enterocolitis in children.

Materials and methods of research. To achieve this goal, the results of laboratory data and the clinical course of the disease of children from the department of gastroenterology of the Samarkand regional Children's Multidisciplinary Medical Center aged from 1 to 3 years were analyzed. A clinical examination was conducted with the collection of anamnesis and complaints from the parents of the patients. 40 patients were included in the study. In all patients, this pathology manifests itself acutely or chronically, depending on the frequency of ingestion of the food allergen and individual characteristics. In this age group, the main cause of diseases is the inclusion in the diet of products containing cow's milk proteins (CMP), products containing soy and egg proteins.

The clinical picture of gastrointestinal food allergy in acute course is characterized by copious and repeated vomiting (in > 95% of patients), which occurs 1-4 hours after eating. Diarrhea can also occur after 5-10 hours (in 25-50%). The symptoms can be quite severe, and up to 15% of patients experience hemodynamic instability. On the other hand, a chronic gastrointestinal allergic reaction to food is manifested by chronic watery diarrhea (with an admixture of blood and mucus), periodic vomiting, bloating, moreover, insufficient weight gain. In a subgroup of patients, symptoms gradually worsen and can lead to dehydration (in 15-45%) and metabolic disorders (in 5%). As a rule, a chronic non-Ig-E-mediated reaction occurs with the constant use of cow's milk or soy-based milk mixtures.

The results of the study. To assess the effectiveness of the examination, anamnestic data and laboratory data such as enzyme immunoassay, general blood

test and coprological examination were collected. From the anamnestic data collected from the parents of patients, the complaints were as follows: in the acute course of a non-Ig-E-associated allergic reaction, pain in the epigastric region (in 77%), flatulence (in 95%), diarrhea (in 97%) (loose stools with an admixture of mucus with a greenish tinge), lack of mass retention-growth indicators. Complaints include symptoms directly from the gastrointestinal tract. The nature of the stool: liquid or watery stools from 5 to 14 times a day with a systemic inflammatory response. Complaints from parents with a chronic course of allergic enterocolitis are manifested by chronic watery diarrhea (sometimes with an admixture of blood or mucus), periodic vomiting, bloating and insufficient weight gain. In a subgroup of patients, symptoms gradually worsen and can lead to dehydration (in 15-45%) and metabolic disorders (in 5%).

Table 1 below shows the anamnestic data of complaints from parents of 40 patients receiving treatment in the Department of Gastroenterology of the Samarkand Regional Children's Multidisciplinary Center, which is the clinical base of the 1-Department of Pediatrics and Neonatology .

Table 1. Comparative analysis of the main clinical signs at admission.

	Stool frequency	Color indicator	Smell	Duration of the disease	Mucus
Acute course: non-Ig-E-mediated gastrointestinal reaction to food	From 5 to 14 times a day	A greenish tint	Sharp	From the onset of the disease to 1 month	In large amounts
Chronic course: non-Ig-E-mediated gastrointestinal reaction to food	From 2 to 7 times a day	Dark green or brown	Sour	From 1 to 3 months	In a significant amount

In young children, allergic enteropathy is most often caused by hypersensitivity to CMP (possibly its combination with allergies to soy, egg, wheat and other products) and is characterized by prolonged diarrhea, vomiting, insufficient body weight gain, anemia and hypoproteinemia.

Table 2 also shows laboratory data and clinical signs of food protein-induced enterocolitis.

Table 2. Enterocolitis induced by dietary proteins

Age	From 1 year to 3 years
Allergens	There are often several allergens: Cow's milk proteins, chicken eggs, soy; Chicken, fish — for older children
Clinical manifestations	Progressive diarrhea with the presence of mucus, vomiting, flatulence. Enteropathy with loss of protein Delayed weight gain
Laboratory data	Coprological examination: Leukocytes, mucus, neutral fat, muscle fibers, fatty acids in feces. Soap, starch-a small amount General blood test: Anemia, hypoalbuminemia IFA-IgE is normal

As a rule, chronic non-IgE - mediated allergic reactions occur with the constant use of cow's milk or soy-based milk mixtures. The defining feature of chronic non-IgE- mediated allergic reactions is the recurrence of symptoms that manifest themselves acutely when, after a period of withdrawal, the trigger food is reintroduced (the phenotype of the transition from acute to chronic)

Conclusions: Thus, in young children, allergic enteropathy is most often caused by hypersensitivity to cow's milk proteins CMP (possibly its combination

with allergies to soy, egg and other products) and is characterized by prolonged diarrhea, vomiting, insufficient body weight gain, anemia, hypoproteinemia. In the future, the above leads to a lag in physical development, and in severe cases, to mental retardation of children.

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