

## ASSESSMENT OF FOOD ALLERGY CORRELATION AND ATOPIC DERMATITIS AT EARLY-AGED CHILDREN

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**Abstract.** *One of the actual issues of modern pediatrics is the issue of food allergies due to high incidence rates, a significant decrease in the quality of life of children, as well as the progression of the disease to other pathological conditions. The purpose of the work was to assess the correlation between food allergies and atopic dermatitis in young children, during which 26 children in the age range from 6 months to three years were examined with a diagnosis of mild and moderate atopic dermatitis. It was determined that at an early age in children, the development of atopic dermatitis is based on an increased level of sensitization to food allergies, and most often increased sensitivity was noted to foods such as cow's milk, citrus products and eggs.*

**Keywords:** *atopic dermatitis, food allergy, citrus fruits, IgE*

Actuality. Atopic dermatitis (AD) is a significant medical problem with a high incidence in the work of pediatricians and allergists and at present time among children the incidence of atopic dermatitis ranges from 12 to 25%, while among allergic pathologies the incidence of this disease varies from 50 to 75%. Increased interest in this pathological nosology is due not only to its high incidence among children, but also to its early manifestation, duration of course and frequent relapses [1,2,3,5].

As a result of atopic dermatitis, there is a significant deterioration in the quality of life of patients, with the presence of symptoms of intense itching, causing cosmetic problems, sleep disturbances, increased irritability, the development of depressive states, etc. [5,6].

The development of AD in childhood can be based on many factors that depend on the age of the patient and the form of the pathological process, which determines the development and severity of the disease. There is a wide range of factors that can contribute to the occurrence of atopic dermatitis, among which most often we can highlight food forms such as cow's milk, chicken eggs, nuts, fish products, gluten, various berries and citrus products, etc., as well as supplements, including its composition: sulfites, salicylates and various dyes; medications, such as antibiotics of various groups, vitamins, immunomodulators, etc.; aeroallergens, such as house dust mites, mold spores and other pollutants found in the home; allergens of bacterial nature, animals and plants and others [7,8,9].

Very frequently intolerance to cow's milk develops in 70-90% of children in the first year of life suffering from atopic dermatitis. Besides that, a high potential to cause allergic reactions is found while eating eggs, which indicates that the etiology of the formation of AD in early childhood belongs to food allergens [11,12].

Based on the above, the actuality of this pathology is due to its widespread prevalence, in particular, in childhood.

The purpose of this work was to assess the correlation between food allergies and atopic dermatitis in young children.

Materials and methods. To carry out this work, there were analyzed 26 children, who were admitted for treatment to the city children's clinical hospital N. 1 of Tashkent city with a diagnosis of AD with mild and moderate types of course in the period from September 2023 to

February 2024, during the period when the complaints upon admission, collecting anamnestic data, as well as conducting physical and laboratory research methods were studied.

The severity level of AD was assessed based on the EASI index, which is one of the effective and comprehensive methods for assessing AD in a given age period, and this index was ranked according to the following parameters: 0 - no signs of pathology; 0.1-1 skin is almost clean; 1.1-7 - mild course of the pathology; 7.1-21 - moderately severe course; 21.1-50 - severe form; 50.1-72 - very severe form.

The analysis of the data package was carried out on the basis of the Statistics program, while in the comparative analysis of the level of occurrence of signs and their differences in independent groups, a statistical model was used based on the Pearson Chi-square test, and the Spearman correlation coefficient was used to analyze the correlation of parameters.

Research results. There were 26 children examined in the age range from 6 months to three years with a diagnosis of mild and moderate atopic dermatitis, among whom the number of boys was 16, and the number of girls was 10.

With the age distribution of the patients, it was determined that the number of children in the age range from 4 to 12 months was 2, accounting for 7.7% of the total number studied, while the number of children studied in the age range from one to three years was 24 children. which amounted to 92.3% of all those studied, when analyzing the onset of the disease, it was determined that in 18 children (69.23%) the disease developed before the 6-month age period, while in 8 studied, accounting for 30.77%, the first signs of the disease developed after 6 months of age.

It was found that in patients with a moderate course of atopic dermatitis, a family history was identified in 81.2% of cases (9 out of 26), and in patients with a mild course - in 66.7% of cases (10 out of 26). Only 5 of 26 patients with atopic dermatitis had both parents who did not suffer from allergic diseases. In 46.15% of cases, allergic diseases were in the mother, in 30.76% - in both parents, while in fathers, allergic diseases were less common, in only 19.23% of cases, while AD in parents was more often determined to have signs food allergies, hay fever, allergic rhinitis and AD.

In 34.61% of cases (9 children), the first signs of AD developed against the background of non-compliance with the diet by their mothers during lactation, and in 23.08% of cases (6 examined) during the transition to artificial feeding, the results of which are shown in Table 1.

**Table 1**

***Nutritional factors for the onset of AD at an early-aged child depending on the severity of the disease***

Nutritional factor	Total quantity children with AD (n=26)		Mild AD (n=11)		Moderate AD (n=15)	
	Abs	%	Abs	%	Abs	%
Diet violation by the mother during breastfeeding (dairy products)	9	34,61	5	55,56	4	26,67
Introduction of adapted milk formulas	6	23,08	3	27,27	3	20
Introduction of complementary foods (vegetables, fruits, fish, eggs)	6	23,08	2	18,2	4	26,67
Taking medications (antipyretics, vitamins)	3	11,53	1	9,1	2	13,33

Violation of the child's diet (citrus fruits, chocolate)	2	7,7	0	0	2	13,33
Total (Abs)	26		11		15	

A correlation analysis of food allergens and AD showed that in terms of the frequency of IgE determination in patients with AD, food allergies to cow's milk (69.23%) and citrus fruits (73.1%) ( $p = 0.05$ ) ranked first. further on eggs (65.4%) and chocolate (61.54%), fish products (38.46%), honey (34.61%), peach (23.08%), nuts (19. 23%), strawberries (15.38%), legumes (3.84%), while no significant statistical parameters were determined for the relationship between IgE and the form of AD severity (correlation coefficient  $p = 0.429$ ).

Additionally, there was identified variations in cross-current allergies with products such as cow's milk and eggs, chocolate and nuts, citrus fruits and peaches, honey and nuts.

According to the results of the study, it was found that at an early age in children the development of atopic dermatitis is based on an increased level of sensitization to food allergies, and most often increased sensitivity was noted to foods such as cow's milk, citrus products and eggs.

**Conclusion.** The high incidence of atopic pathologies in early childhood is one of the frequently discussed issues in allergology today, the development of which is based on the fact that the presence of food allergies in children often does not always cause concern among parents. However, it should be taken into account that in the absence of medical care and treatment, this condition can not only worsen the condition and quality of life, but also become a trigger factor in the development of diseases of bronchial asthma, eosinophilic esophagitis, AD, hay fever and other allergic complications, while the solution This problem largely depends on the implementation of preventive measures, especially with regard to the primary prevention of food allergies. This will help reduce the number of children suffering from food allergies and, as a result, reduce the likelihood of various symptoms of atopy later in life, including skin, gastrointestinal and respiratory manifestations.

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