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FEATURES OF THE COURSE OF ACUTE RESPIRATORY VIRAL  
INFECTIONS IN YOUNG CHILDREN WITH ATOPIC DERMATITIS

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**Annotation:** *The article discusses the main objective signs of atopic dermatitis (AD), which allow us to determine this group of frequently ill children without using special laboratory methods. The immunological and metabolic disorders that have occurred in children with blood pressure determine the severity of acute respiratory infections and the duration of the disease, hyperergic and anaphylactic types of response. Accordingly, such children need a detailed examination, correction of altered immunological processes, and additional prevention of diseases.*

**Key words:** *constitutional abnormalities, atopic dermatitis, acute respiratory viral infections.*

Relevance. Atopic dermatitis (AD) is the most common inflammatory skin disease in children and occupies a leading place in the structure of allergic diseases [1,2,16]. According to epidemiological studies in different countries, AD affects from 10 to 28% of children [3,5,7,9]. The prevalence of AD and acute respiratory infections are most common in childhood [2,8,9]. Their share together with influenza is at least 70% in the structure of all morbidity in children, and the highest incidence is observed in children attending children's educational institutions [4,3,10,11]. In recent years, in comparison with the previous decade, there has been an increase in the number of patients with AD by 30-40%. Currently, the issues of immune disorders in AD are being discussed and the search for the most optimal diagnostic criteria for detecting AD in children with normal and elevated levels of total IgE in the blood serum, as well as with positive and negative values of allergen-specific IgE continues [5,8,14].

Thus, the study of predisposing factors of blood pressure is an urgent problem of the present time and requires further study.

The aim of the study was to determine predisposing factors to the development of AD in children, track the prevalence of individual objective signs of this disease, investigate the course of acute respiratory viral infections (ARVI) in children with AD in comparison with children without this disease, and consider the possibility of individual prevention of ARVI in AD.

Materials and methods of research. We used data from an objective study of 80 children aged 1-7 years with objective signs of AD (group 1) assigned to polyclinic No. 3 in Andijan, and also conducted a retrospective analysis of their outpatient records. For the comparison group, 25 healthy children aged 1-7 years (group 2) who had no objective signs of



constitutional abnormalities were selected, and their outpatient records were retrospectively analyzed.

Results and their discussion. ARVI affecting the respiratory tract is caused by various viruses, transmission is characterized by airborne droplets. Acute respiratory viral infections are characterized by a high incidence in Uzbekistan: 20 thousand cases per 100 thousand population. According to WHO data, 2.5-4 million severe cases of influenza and 20-300 thousand deaths as a result of influenza infection are registered annually in the world. On average, children can get sick from 4 to 8 times a year, and those who attend educational institutions up to 10 times [3,13,14].

Table 1.

Flu / ARVI referral rates in children's age groups per 100 thousand population in 3 cities of the Republic of Uzbekistan

Age (years)	Epidemiological seasons (years)			
	2020-21	2021-22	2022-23	2023
0-2	27,4	0-2	27,4	0-2
3-4	34,5	3-4	34,5	3-4
5-7	28,5	5-7	28,5	5-7

An increase in the incidence of diseases in children is noted in the cold season, in the off-season and under the influence of stressful situations. ARVI is characterized by an exceptionally easy mechanism of transmission of the pathogen, a high intensity of the epidemic process, a massive nature of diseases and a high variability of viruses, which requires both individual and mass prevention. But personal prevention does not work identically: some patients are really infected less often, while others do not significantly change the frequency and duration of diseases without paying attention to the measures taken. In this regard, a specific concept was introduced - frequently ill children (CHBD) (patients with recurrent infections) [13]. Patients with recurrent infections include children in accordance with the infection index (AI), defined as the sum of all cases of acute respiratory diseases (ARI) within a year to the patient's age. It ranges from 1.1 to 3.5 for BPD, and occasionally varies from 0.2 to 0.3 for those who are ill. In real time, there are 5 groups of BPD that significantly differ in their own characteristics [3]:

There are 5 groups of BPD according to predisposing mechanisms:

1st group. It includes patients with a predominant occurrence of allergies and allergic pathology in the anamnesis, both on the maternal and paternal side.

2nd group. Patients mostly with neurological pathology.

Group 3. Patients with primary vegetative vascular dystonia caused by hereditary disposition.

4th group. Patients with a predominant loss of the lymphatic system from birth.

Group 5. Patients with predominant metabolic and constitutional disorders.

As can be seen, this classification is based mainly on diatheses-extreme, borderline with pathology variants of the constitution. The concept of diathesis is essential for pediatrics. Numerous evidences of the dependence of the state of health and psychomotor development of children on the presence of certain constitutional anomalies have made the teaching of



diatheses an important part of children's medicine [9, 12]. Introduction of such terms in clinical practice such as "exudative diathesis", "children's eczema", "neurodermatitis", etc. It often complicates the formulation of the results of scientific examinations and the implementation of diagnostic and therapeutic standards. In addition, the substitution of similar terms for the clinical diagnosis to the appropriate extent. determines the conduct of unjustified and inadequate care for the patient. According to the literature, children with AD often show multidirectional dynamics of antibody genesis indicators, consisting both in a decrease in IgG, IgM, and IgA levels, and in their increase, the dynamics of indicators reflecting the state of the complement system, according to different authors, mostly coincide. The content of complement components decreases in both children and adult patients with AD. The results of different authors' studies of the functional activity of leukocytes in children with AD coincide. In children with AD, a decrease in neutrophil phagocytic activity, phagocytic index, and HCT test parameters was observed. In children with AD, the predominance of Th2 activity is accompanied by high levels of IL-4, IL-5, and total blood IgE. At the same time, there is a decrease in the production of IFN- $\gamma$ . Thus, the data available in the literature on the dynamics of indicators of general and local immunoreactivity in patients with AD are contradictory. The search for the most optimal clinical and immunological differential diagnostic criteria for the diagnosis of blood pressure with different values of total and allergen-specific IgE continues. This will allow us to deepen our understanding of the pathogenetic mechanisms of development, age-related features of clinical manifestations, course options and causes of exacerbation of various forms of blood pressure in children and adolescents, and improve treatment and rehabilitation measures for this disease.

A combination of immunological and metabolic disorders can determine in such children, in addition to a general decrease in immunity, there is also an increased risk of anaphylactic reactions and hyperergic inflammation, which is reflected in the nature and spectrum of pathological conditions and the course of psychomotor development. One of the important questions is what predisposes to the formation of AD. During the study, during the survey of mothers and analysis of outpatient records, the most common pathologies of the antenatal and intranatal periods in children with this type of diathesis were identified (Table 2).

Thus, from Table. 2 shows that hereditary burden of allergic diseases in the group of children with AD was noted in 96% of cases, while in II group II in 10%. Pathologies of pregnancy in the form of a threat of termination, toxicosis were much more often present in mothers whose children have an anomaly of the constitution. The complicated course of labor occurred in 74% of cases in group I, which is more than 2 times higher than in children II in group II. 82% of the children in the first group had a high birth weight, and only 4% in the second group.

Table 2.

Frequency of pathologies of the antenatal and intranatal period in children with AD (group I) and children (group II)

Pathologies	Group I	Group II



Потомственная Hereditary burden of allergic diseases	95%	9%
Risk of termination of pregnancy	69%	23%
Pregnancy toxicosis	84%	36%
Maternal nutrition disorders (consumption of obligate allergens, large amounts of animal protein and small amounts of vegetable carbohydrates)	97%	54%
Complications in childbirth (hypoxia, operative delivery, long and rapid delivery)	72%	32%
High birth weight (>4000 g)	80%	5%

After determining the predisposing factors to the formation of AD, attention is drawn to the frequency of occurrence of objective signs of this anomaly. Cutaneous manifestations of AD were observed in 100% of cases in the first group of children (48% had them during the objective study, and according to the results of a retrospective analysis of outpatient records, 100% of children in this group recorded from 1 to 6 episodes of atopic dermatitis or urticaria per year). In the second group of children, skin manifestations were not detected either objectively or retrospectively. After analyzing the severity of clinical signs of blood pressure based on a retrospective analysis of outpatient records, the features of the course of acute respiratory viral infections in children with group I compared with group I were noted. These data are summarized in Table 4. This table shows that children with AD develop ARVI for the first time in their lives much earlier than children from the control group. The average duration of the disease in the first group is 17 days versus 8, respectively. The incidence of acute laryngotracheitis, acute bronchitis, pneumonia, and acute sinusitis is significantly higher than in group II. There is also a more frequent appointment of antiviral, antibacterial and physiotherapy in children with this constitutional anomaly than in the second group.

**Conclusion.** This deviation of the constitution, like HELL, is encountered quite often. Allergic diseases in caregivers, pathology of pregnancy and childbirth predispose to its development. Among the objective symptoms of AD, skin manifestations in the form of eczema, seborrhea, dermatitis, and urticaria are always present. Due to the fact that in AD, a combination of immunological and metabolic disorders is hoped, not counting the joint decrease in immunity, also an increased risk of anaphylactic reactions and hyperergic inflammation, ARVI appear at a much earlier age, are more often complicated, in fact, which leads to an extension of the duration of the disease, the appearance of complications that require bactericidal therapy and physiotherapy. For example, as often ill children with AD belong to the 1st group of often ill children, special attention should be paid to the formation of rational food habits and optimization of everyday life in the development of immune protection in these children.

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