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# STUDY OF THE CLINICAL AND DIAGNOSTIC CHARACTERISTICS OF ALLERGIC DISEASES IN CHILDREN

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**Abstract:** Currently, one of the most important problems, especially in pediatrics, is allergic diseases. This pathology is one of the most common diseases in children. At the same time, an increase in the frequency of serious allergic reactions and an early onset of clinical manifestations are noted.

**Key words:** Allergy, immunobiologist, allergic rhinitis, immunoenzyme analysis.

The increasing prevalence of allergic diseases among children and adolescents remains one of the most important medical and social problems and is a serious cause for the health economy of many countries of the world (2). Allergic diseases have a negative impact on physical and psychological status, social life, participation in school and reduce the quality of life of patients themselves and their families (3).

However, despite the high prevalence of the disease, the problem of allergy is often not given enough attention: often, sick children in pediatrics do not receive the necessary medical measures at all or are treated only occasionally by taking symptomatic drugs; moreover, self-medication is common [1,6].

In recent years, domestic and foreign researchers have studied the clinical and immunological aspects of allergic diseases in children, the prevalence and intensity of occurrence of these diseases in children, various treatment methods, and prevention of complications [3,5].

The results obtained on the development of new methods of diagnosing allergic diseases in children revealed the risk factors for the development of allergic diseases, including food allergies in children.

However, the study was mainly conducted in children with an already developing allergic condition, the conditions before the pathological condition were not taken into account, the relationship between the living conditions of the risk factors for the development of allergies and the environmental conditions of the region was determined practically. There is no comprehensive, conceptual approach to the study of the formation and development of allergic diseases in rural areas. In addition, there are unfortunately very few epidemiological, comprehensive studies on the prevalence of allergic diseases in the rural areas of our country and the intensity of study. Studies on the spread of these diseases, clinical and immunobiological aspects of allergic diseases in children are rare [2].

In this regard, research on a conceptual approach to the comprehensive clinical, immunological, medical-social study of allergic diseases among children living in rural areas, as well as the development of new criteria for early diagnosis, prognosis of their course and consequences, is one of the urgent problems [4].

Today, the term "allergy" refers to an unwanted specific immune response that can lead to allergic diseases, the implementation of various pathogenetic mechanisms (2).



Atopy significantly increases the risk of formation of high antigenic loads: toxicosis for pregnant women, irrational drug therapy, exposure to occupational allergens, unilateral carbohydrate nutrition, abuse of products with mandatory food allergens, etc. Avoiding these moments is an important factor in prevention (14).

The links of the complex chain of the complex approach in the treatment of allergic diseases, in addition to the achievement of adequate basic therapy and immunological tolerance, are preventive measures and exclusion of the influence of triggers (14, 11). Immunoprophylaxis is undoubtedly one of the most important links in the complex treatment of patients with allergic diseases. However, significant success can be achieved only by gathering all the links of this important chain: full and timely implementation of preventive measures and elimination of provoking factors (14).

The purpose of the study. Study of clinical and diagnostic characteristics of various manifestations of allergic diseases in children

#### Material and method of research.

The study group (clinical, psychological status and quality of life) consisted of 552 children and adolescents aged 6 months to 18 years (including 201 control group). The average age is 8.5±0.5 years. Boys 69%. A total of 753 people participated in the study: children and adolescents (Table 1)

Table 1 Distribution of children in the study group with allergic diseases by age and gender (%)

Checked children	Research group	Control group
Son	380 (69%)	114 (57%)
Girl	172 (31%)	87 (43%)
Total	552 (100%)	201 (100%)

During the research, when we visited the schools, 280 parents were asked about asthma and allergies and their level of knowledge was determined.

Children with allergic respiratory diseases were selected purposefully. Next, the nosological structure of the research group was determined: BA (bronchial asthma) (n= 68, boys - 63%), AR (allergic rhinitis) (n= 44, boys - 71%), BA, AR (n= 126, boys - 67%), BA, AR, AD (atopic dermatitis) (n= 69, boys 65%) (Table 2).

Table 2 Distribution of children in the study group with allergic diseases (%)

Checkedchildren	Boys		Girls	
	An absolute number	%	An absolute number	%
B.A	68	22	14	8.5
AR	44	14	28	17
BA, AR	126	41	96	58
BA, AR, AD	69	23	27	16.5
total	307	100	165	100

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The presence of a predisposition can only be a contributing factor. The transformation of this tendency into a clinical manifestation occurs only through the relevant environmental factors. They are their allergens for everyone [Global strategy for the treatment and prevention of bronchial asthma / Ed. Chuchalina A.G., 2002]. In order to determine the risk factors for the occurrence of allergic diseases of an atopic nature, we used the questionnaire method, reflecting the observational data showing the progress of the "allergic walk" and the external causes of the implementation of the atopic constitution.

Research results. The children's sample has a number of characteristics to study the effectiveness of complex methods of examination and treatment of patients with allergic pathology. Outpatient card data showing the symptoms of the initial manifestations of allergy and the official registration of the allergic diagnosis were analyzed. Immunoenzyme analysis results of determination of specific enzyme IgE-AT in blood serum showed that a comparative analysis of the data between the investigations and the control group during our study was conducted. It was found that patients with BA, AR, AD have sensitivity to house dust, grass pollen mixture, and weeds more often than patients with BA, AR (r<0.05). Most of the time groups with each other level of sensitization in comparison high was  $_{\rm B}$  A , A R cow to milk (r<0.005), chicken meat (r<0.001), wheat it (r<0.05). On the contrary , the present at the time chicken egg , chicken to meat (r<0.01), library to the dust of the dog hair , cat higher than hair (r<0.05). sensitivity more determined . B is A , A is R, A is D to patients than more library dust to antigens high sensitivity was determined (r<0.05).

In general, patients were more likely to be sensitized to a mixture of tree pollen (r<0.05), weed (r<0.001) compared to the control group. It was found that the frequency of occurrence of high level of sensitization is high in children with BA, AR, AD.

In general, detection of sensitization status was significantly higher (r<0.05) in children with simultaneous manifestations of asthma, rhinitis and dermatitis.

The distribution by levels showed that sick children had more frequent sensitivity in the average level and less children with a low level of high sensitivity than in the comparison group.

In conclusion, we can note that children in the control group have high indicators for the relative frequency of sensitivity to many allergens, which indicates a low level.

We reflected the average values of the general indicators for the study group during the study period: respiratory function, local eosinophilia and peripheral blood parameters responsible for the stress level of the immunoallergological state. Investigations show that abnormal indicators: local eosinophilia index, IL-4 pg/ml, INF-y pg/ml, total IgE in blood serum ME/ml, peripheral blood eosinophils abs. mkl. A serum cytokine profile reflecting the effect of immunomodulatory therapy is shown. Multilevel (parametric and non-parametric methods) statistical processing was performed on the indicated data and approximately equivalent results were obtained. It was found that the average values of IL-4, IL-4, and INF-u increased before the treatment.

IL-4 average value  $246.3 \pm 167.6$  pg (vg - 413.9, ng - 78.6), average 109.5 (max - 1784.4, min - 0.0).

INF is average value  $152.1 \pm 167.1$  pg (vg - 319.3, ng - 14.9), median 32.2 (max - 930.0, min - 0.0).

IL- average value  $388.5 \pm 268.4$ v pg (vg - 656.9, ng - 120.1), median 53.8 (max-930.0, min-0.0).

From treatment after in the blood IL-4 and INF is at u level significant decline observed.

IL-4 - average value  $36.5 \pm 33.8$  pg (vg - 70.3, ng - 2.7), average 4.0 (maximum 293.2, min-0.0).

INF is average value  $37.8 \pm 34.4 \text{ pg}$ , (vg - 72.1, ng - 3.5), median - 4.0 (max-213.0, min-0.0).

IL - average 218.4 + 202.5 pg, (vg - 420.9, ng - 15.9), median 47.8 (maximum 923.0, min-0.0).

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So already is available atonic disease has been of children immunoallergological of the situation reflection bringer indicators given . Allergic inflammation of tissues level descriptive of parameters average in values sure changes found out that their allergic condition diagnosis and effectiveness of immunomodulatory therapy evaluation as a screening for offer to do for basis gives \_

#### Conclusion.

- 1. Atmospheric air in the right 3rd year analysis to do results based on received dust in 44.95% of samples quantity, 2.19% of SO2 amount REK higher than that showed.
- 2. Questionnaire Results: 36% of children with allergic rhinitis are highway road near, 16% industry to enterprises near is located in apartments residence 28% of them are at home smokers 20% of them are fathers or allergic conditions in the mother that there is showed.
- 3. Questionnaire As a result, 60% of children develop allergic rhinitis reason dividing by 3 risks factor under the influence of ( highway road , industry to enterprises near is located in apartments residence to do , in the house smokers that there is ) . was determined .

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