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# CLINICAL SIGNIFICANCE OF PHYSIOTHERAPY IN THE TREATMENT OF PARASITIC INFECTION IN CHILDREN

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#### Abstract:

The problem of protecting children's health is one of the priority tasks of health care today. Currently, one of the factors determining the state of health is socially determined diseases, including protozoonoses and helminthoses, which make up 99% of all parasitic diseases. Parasites often contribute to the development of chronic eating disorders, gastrointestinal tract diseases, chronic intoxication, sensitization of the body, and serve as the main factors of weakening of the immune system.

**Keywords**: Helminthosis, giardia, ascarida, immunity, parasitic diseases, antigens, antibodies, bronchial asthma.

#### Introduction

To date, the clinical manifestations of giardiasis, ascariasis, enterobiosis have been fully studied, but global environmental changes in recent decades, the widespread use of antibacterial agents, immunotropic and other medicinal substances, and a number of other factors have led to the development of parasitic invasions. changed the clinical picture and this disease requires further study

[Blaxter M. 2016. Cook GC 2016. Hayashi K. 2017. Hlavsa MC 2019].

In addition, the volume of migration of humans, domestic animals, and microorganisms has changed dramatically over the past decade. Food products produced in countries with a tropical climate and other places where various parasites live (cereals, frozen meat, shellfish, fish) can now be found in any country of the world. Latent parasitic infection does not show itself clearly and therefore can remain for a long time outside the scope of examination of a doctor or specialist in infectious diseases.

Unfortunately, many methods of diagnosis of giardia and nematodes have low sensitivity, subjective and objective factors, including the fact that cysts of giardia are not constantly separated, the difficulty of microscopic identification of parasites, the main thing is that the parasites in the human body are only male helminths make it difficult to diagnose.



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#### The Goal:

Clinical and immunological characteristics of the diagnosis and course of ascariasis, enterobiosis and giardiasis in preschool children

#### Method and material of scientific investigation

- > Survey methods
- > anthropometric studies (weight, height)
- > Instrumental methods
- > General blood analysis
- > General analysis of urine
- Analysis of feces for parasite eggs and simple animals.
- Biochemical blood test
- Caprology
- ➤ IFA, IgE, IgG, SRO, LF.

#### **Results and Analyses**

The significant number and spread of parasitic diseases in children causes an increase in allergic pathology, and one of the most important tasks of health care is the prevention and effective diagnosis and treatment of children suffering from allergic diseases. It should be noted that only dynamic, clinical and functional observation of the patient allows to make the correct diagnosis of chronic diseases.

# 3.1. Clinical features of the disease and functional changes in children suffering from parasitic invasion.

In our study, 100 children aged 3-14 years with allergic diseases were observed.

The distribution of patients by age groups is as follows.

**Table 3.1.** 

Age of	Control group	Allergodermatoses	Bronchial asthma	SOB	TOTAL
patients	n=20	n=44	n=21	n=35	
3-7 years old	16.2% (11)	33.8% (23)	14; 20.6%	20; 29.4%	68
8-14 years	17.3% (9)	40.4% (21)	7; 13.4%	15; 28.8%	52
old					
Total	20	44	28	35	120

It is known that the formation of the immune system is a process determined by the interaction of the regulation of developmental genes with environmental factors (antigens). At certain stages of growth, gene depression and gene regulation replacement of phenotype and especially



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immunocompetent cell functions change. The manifestation of such changes in genetic control was proposed to be called the critical period of the immune system [46.384b.]

According to the concept of JB Solomon (1978), there are verst pillars or important (critical) stages (milestones) in human ontogeny, which define transition periods of general development and equivalent states of the immune system. Since the selected contingent of sick children is 3-7 and 8-14 years old, this age period corresponds to the fifth important period of the formation of the human immune system according to the concept.

Distribution of sick children by gender in the studied groups is presented in Table 3.2. Studies show that 40.0% (26) of patients with Allergodermatosis, 20.0% (13) with BA, 29.2% (19) with SOB are boys. The number of boys with allergodermatosis is 1.44 times, 1.63 times with BA, 1.19 times more than girls with SOB, which is consistent with the information of Nisevich LL and other authors about the tendency of men to chronic diseases of the bronchopulmonary system . That is, boys are more susceptible to the disease, which is consistent with the theory of less genetic safety and adaptation for men.

SEX. Control group. Allergodermatosis. Bronchial SOB. TOTAL. n=20n=44asthma. n = 35n=2132.7% (18) 14.5% (8) Girls 23.6% (13) 29.1% (16) 55 Children 12.7% (7) 40.0% (26) 20.0% (13) 29.2% (19) 65 44 Total 20 21 35 120

**Table 3.2.**Characteristics of the distribution of sick children by gender.

According to foreign authors, genes determine all immune processes in the body. Thus, there are 836 protein-coding genes on the X chromosome. Girls have two copies of the chromosome, while boys have only one. This makes boys more prone to DNA damage and mutations (the damage is harder for them to repair). In addition, some genes work differently depending on a person's sex, protecting some and harming others.

The severity of the course and outcome of chronic diseases is significantly influenced by the timeliness of hospitalization and the provision of medical care. Children observed for treatment and examination were admitted at different times from the onset of the disease.

The comparative analysis of the indicators showed that patients with allergodermatosis mostly on the 6-8th day of the disease - 59.1% (26), with BA - on the 2-4th day of the disease 47.6% (10), with SOB 1 -2 days 62.8%(22). The rest of the children were admitted later.

It should be noted that children admitted late were repeatedly treated unsuccessfully in outpatient settings and at home.

As it was determined from the anamnesis, most of the examined children had previously had a mixed diet, which not only disrupts the normal physiological development of the child, but also affects the spectrum of subsequent diseases and the course of the main process (Fig. 3.4).



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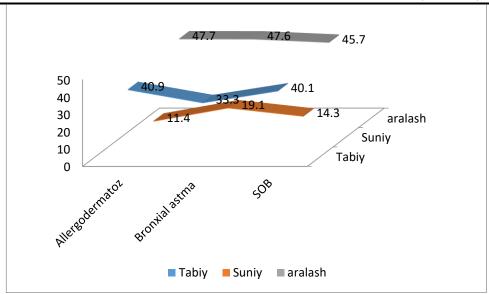


Figure 3.1. Nutrition of children up to 1 year old.

Negative premorbid background significantly affects the severity of chronic diseases of the respiratory system with cases of allergodermatosis in children (Fig. 3.5).

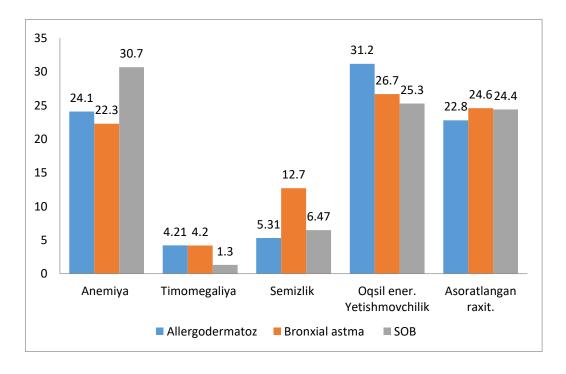


Fig. 3.2. Influence of premorbid background on the course of the disease.



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It is known that anemia is a very common disease in pediatrics. The frequent occurrence of anemia in children is associated with their intensive growth, activity of the erythropoiesis process and progressive increase in the number of formed elements. At the same time, the hematopoietic apparatus in children is functionally immature and very vulnerable to various influences. Long-term anemia in children is accompanied by the development of hypoxia, deep tissue and organ changes. Anemic children lag behind their healthy peers in physical and mental development, often suffer from intercurrent diseases, are prone to the development of chronic pathological processes and various complications. and the slowing of the immune response is reversed [50,168-169b.]

Analyzing the background of children with allergodermatosis, it was found that 27 children with BA and 15 children with 1 and 2 degrees of anemia, 25 children with allergodermatosis and 14 children with BA had complications of rickets. Protein-energy deficiency of 1-2 degrees was observed in 36 children in the allergodermatosis group and in 17 children with BA.

Thus, features of the premorbid background are risk factors predisposing to recurrent allergodermatosis, bronchial asthma, and chronic obstructive bronchitis.

#### **Summary**

In children with combined helminthosis and allergic pathologies, we can see the imbalance in the cellular and humoral joints of immunity. Parasitic invasion not only leads to increased allergic reactions, but also worsens the prognosis of the disease. The following results were obtained in the study: it was found that the level of CD20+, CD16+, IgM, IgE, SRO, IL-4 increased and the level of CD3+, CD4+, CD8+, IgG, IgA and IFNy decreased.

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