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# ПРОФИЛАКТИКА ГЕЛЬМИНТОЗОВ У ДЕТЕЙ РАННЕГО ВОЗРАСТА

Аннотация. В настоящее время распространение паразитарных заболеваний является актуальной проблемой для всего человечества. По данным ВОЗ, более двух миллиардов человек в мире страдают заболеваниями, связанными с кишечными паразитами. Негативное воздействие паразитарных заболеваний на здоровье населения и социальное развитие сравнимо с воздействием таких болезней, как туберкулез, малярия и ВИЧ/СПИД. Рассмотрены распространение, пути передачи, особенности патогенеза развития осложнений инфекционного процесса с формированием соматической патологии у детей, вопросы профилактики и лечения. Отмечено, что основную группу риска таких заболеваний составляют дети школьного возраста и младше.

**Ключевые слова:** гельминтозы, энтеробиоз, дети, причины.

## PREVENTION OF HELMINTHIASES IN YOUNG CHILDREN

Abstract. Currently, the spread of parasitic diseases is an urgent problem for all mankind. According to the WHO, more than two billion people in the world suffer from diseases associated with intestinal parasites. The negative impact of parasitic diseases on public health and social

development is comparable to that of diseases such as tuberculosis, malaria and HIV/AIDS. Distribution, ways of transmission, features of the pathogenesis of the development of complications of the infectious process with the formation of somatic pathology in children, issues of prevention and treatment are considered. It is noted that the main risk group for such diseases are children of school age and younger.

**Keywords:** helminthiases, enterobiasis, children, causes.

According to the World Health Organization, about 5 billion people in the world are infected with protozoal diseases and helminthiasis, which is a large part of the population of the planet [1]. At the same time, according to WHO experts, helminthiasis has to some extent become "neglected diseases" - their medical and social importance is underestimated all over the world, even in endemic countries, they are not paid enough attention by health authorities and the population.

Materials and methods of research. Parasitic worms that cause helminthiasis are one of the oldest and most numerous forms of life on our planet. More than 350 species of helminths have parasitized humans, and they mainly belong to two types of worms: roundworms (class Nematoda) and flatworms (class tapeworms — Cestoda, Trematoda). The most widespread population of nematodes - 500 thousand species and their number ranks second among all representatives of the animal world. The main part of these parasites was described in the 19th century. Although the term "ascariasis" is believed to have been introduced by Hippocrates. In recent years, there has been an increase in the incidence of helminthiasis, primarily nematodosis (enterobiasis and ascariasis), the number of people infected with toxocarosis, trichinosis, biohelminthosis - opisthorchosis, diphyllobothriasis, taeniidosis, goat disease is increasing. The tendency of increasing gastroenterological and allergic diseases in children is also to some extent related to the invasion of

## helminths [2].

Helminths use the human body not only as a source of nutrition, habitat and reproduction, but also cause systemic toxic damage to human organs and systems with the products of their vital activity. Most of them are hermaphrodites - they are female, they are male, that is, even one individual is enough to colonize humanity.

**Results and discussion.** Every third person in Europe suffers from helminths. In Uzbekistan, the annual indicator of helminth infections corresponds to 100,000 inhabitants [3]. The most common helminthiasis in Uzbekistan: enterobiosis, ascariasis, trematodosis. The incidence of enterobiosis in the country is 1100 per 100 thousand population. Among the patients, 90% are children, mostly from 1 to 3 years old. The incidence of ascariasis is 100 cases per 100,000 population. Helminths are parasitic multicellular organisms belonging to lower worms. Their characteristic feature is the presence of complex individual development during the life cycle. As a result of the crushing of germ cells from the fertilized egg and the appearance of the germ layers, an adult organism, then organs and tissues are formed [3, 4]. The organism in which helminths develop to the stage of sexual maturity is usually called the final or final host. The most common pathological effect of all helminths is suppression of allergy and immune response. Helminths, their structures and wastes are allergens, cause inflammatory changes, have an immunosuppressive effect and stimulate the intensive production of IgE antibodies [4]. All this supports or initiates chronic allergic diseases such as urticaria, atopic dermatitis, bronchial asthma. Of course, helminthiasis cannot be attributed to real allergic diseases, but we must not forget that allergy is involved in the pathogenesis of these diseases as a mandatory component of the main pathological process. According to many studies, parasitoses contribute to the frequent occurrence of somatic diseases and the exacerbation

of chronic diseases, having multifaceted effects on the host organism, including its immune system [3].

A characteristic feature of many helminthiasis is the chronic course of the disease associated with long-term presence of the pathogen in the body and many re-infections. In the chronic stage of helminthosis, changes in metabolic processes in the host organism occur due to the absorption by parasites of metabolically valuable nutrients: proteins, fats, carbohydrates, vitamins, minerals, as well as due to disruption of neurohumoral regulation and absorption of food in the intestines. Some intestinal helminths secrete substances that neutralize digestive enzymes (for example, a substance that neutralizes the effects of pepsin and trypsin was found in the tissues of the scorpion).

**DISCUSSION**. Protein-calorie deficiency, which greatly affects human development and physical condition, affects almost half of the world's population. There is a clear causal relationship with anemia, vitamin deficiency (ankylostomiasis, diphyllobothriasis, trichuriasis, schistosomiasis) with a number of helminthiasis. Metabolic products of helminths contribute to the change of intestinal biocenosis and increase of opportunistic and pathogenic microflora. The presence of helminthiasis in a child leads to the suppression of the body's non-specific resistance, which leads to an increase in acute respiratory infections. The wrong sequence of tuberculin tests is more often noted. The immune system is always affected by the parasitic antigen, and long-term chronic invasion weakens its functions. A decrease in the activity of T-lymphocytes in the patient leads to the development of bacterial-viral and allergic diseases. In the WHO report (2012), protozoal and helminthic diseases take the leading place among the causes that can cause a state of secondary immunodeficiency: ascariasis, echinococcosis, opisthorchosis, trichinosis, etc.). A common chronic course associated with the long-term presence of the pathogen in the patient's body, which is determined not only by the life of the

parasite, but also by frequent reinvasions, is the main feature of most parasitic diseases. Especially in childhood, parasitic diseases are a common cause of anemia, and also lead to various forms of acquired immunodeficiency, which is associated with a decrease in the immune response of the T-system of the immune system to any antigens. Although there is no clinic, the development of secondary immunodeficiency with intestinal parasitosis has been reported [4, p. 116]. Observations show that the presence of parasites in the body is not always manifested by specific clinical symptoms. The gradual and long-lasting allergic effect of the metabolic products of the parasite and the suppression of the host's immunity create prerequisites for the reduction of the body's resistance and the development of infectious diseases. In addition, it has been proven that young children with helminthic infestation are often prone to other infectious diseases, which is associated with a significant decrease in the body's general resistance and malnutrition [1, p. 76]. Helminthiasis is one of the most common diseases in Uzbekistan, accounting for more than 90% of the total number of parasitic diseases. Long population

the rate of long-term damage remains high. More than 200,000 patients are registered in the country every year. For example, in 2006, out of 7,580,703 people examined for helminthiasis, 263,167 (3.5%) were found to be infected. At the same time, the actual number of people infected with helminths significantly exceeds official statistics, therefore, according to a small study conducted in Andijan region, the infestation of children in individual children's institutions is more than 50%, the frequency of mixed infestations. is 39.6% [3, p. fourteen]. The distribution of individual types of helminths varies by region. Enterobiosis and hymenolepiasis are widespread everywhere, both in the city and in the countryside.

Uzbekistan belongs to the regions infected with echinococcosis, and in recent years, the tendency of population growth in the republic is clearly observed. In some pre-school educational institutions and schools, the prevalence of children infected with the most common parasites in our region - Enterobius vermicularis, Hymenolepis nana, Lamblia intestinalis intestinalis - is 30-35 percent. [2, p. 58]. So, if in 2017 the incidence rate was 5.0 per 100,000 population, in 2021 this indicator was 5.7. Due to the insufficient identification of patients, the necessary measures against the epidemic are being implemented in only one of the three existing foci of the disease.

### **CONCLUSION**

Analyzing the current situation in terms of the prevalence and clinical manifestations of parasitosis, it is possible to note the certain role of helminthiasis and parasitosis in the formation of background conditions in children.

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