УДК 616.995.132.6-053.2

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ЭНТЕРОБИОЗ У ДЕТЕЙ: СОВРЕМЕННЫЕ ПОДХОДЫ К ДИАГНОСТИКЕ, ТЕРАПИИ И ПРОФИЛАКТИКЕ

АННОТАЦИЯ

Энтеробиоз — распространенная паразитарная инфекция у детей, вызываемая паразитическими червями — острицами. Основной путь передачи — контакт в домашних условиях. Широкое распространение энтеробиоза обусловлено высокой контагиозностью острицы и легкостью передачи инфекции. Заболевание различается по тяжести состояния детей: легкая, умеренная и тяжелая, а также по наличию или отсутствию осложнений.
Диагностика энтеробиоза включает сбор жалоб, анамнеза, осмотр перианальной области и выявление контакта с источником инфекции. Первичное действие — подбор эффективных и максимально безопасных противогельминтных препаратов для конкретного ребенка в различных формах: таблетки, анальные суппозитории, сиропы и др. Первичная профилактика энтеробиоза включает соблюдение правил личной гигиены, и, что наиболее важно, своевременное и тщательное мытье рук.

КЛЮЧЕВЫЕ СЛОВА: энтеробиоз, причины, клиника, дети, диагностика, лечение.

UDC616.995.132.6-053.2

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ENTEROBIASIS IN CHILDREN: MODERN APPROACHES TO DIAGNOSIS, THERAPY AND PREVENTION

ANNOTATION

Enterobiasis is a common parasitic infection in children, caused by parasitic worms - pinworms. The main route of transmission is through household contact. The wide distribution of enterobiasis is due to the high contagiousness of pinworms and the ease of transmission of infection. The disease is distinguished by the severity of the condition of children: mild, moderate and severe, as well as by the presence or absence of complications.
Diagnosis of enterobiasis includes collecting complaints, medical history, examining the perianal area, and identifying contact with the source of infection.

The primary action is to select effective and maximally safe anthelmintic drugs for a particular child in various forms: tablets, anal suppositories, syrups, etc. Primary prevention of

enterobiasis includes observing the rules of personal hygiene, and most importantly, timely and thorough hand washing.

KEY WORDS: enterobiasis, causes, clinic, children, diagnosis, treatment.

Enterobiasis is the most common parasitic infection in children, caused by pinworms. In the structure of parasitic diseases in the Republic of Uzbekistan, the dominant helminthiasis is enterobiasis (about 90% of all cases of worm infection), which primarily affects the children's population [1-3]. Hippocrates and Aristotle wrote about this disease many years ago.

According to WHO, more than 5 billion people worldwide suffer from helminthiasis. The wide distribution of enterobiasis is due to the high contagiousness of pinworms and the ease of transmission of infection.

CAUSES OF ENTEROBIASIS

The cause of enterobiasis is pinworms, and the source of infection is a sick person [3,5,10]. The main route of transmission is through household contact. Enterobiasis is most often found in children, since they are much more likely than adults to:

• do not follow the rules of personal hygiene:
• do not wash their hands after visiting a public bathroom, before eating, etc.;
• eat on the street;
• suck fingers, bite fingernails, toys and other objects;

Primary infection occurs through dirty hands, which is why enterobiasis is often called the disease of dirty hands.

Possible mechanical carriers include animals (through fur), flies and cockroaches. When infected and the disease develops, reinvasion is possible, i.e. re-ingestion of pinworm eggs into the mouth through contaminated hands and retroinvasion (maturation of eggs in the anal area and re-movement of them into the rectum) [10,13,14].

CLASSIFICATION OF THE DISEASE

In the International Classification of Diseases, 10th revision, enterobiasis is coded B80.

The disease is distinguished by the severity of the condition of children: mild, moderate and severe, as well as by the presence or absence of complications.

• mild degree - often occurs without symptoms, but sometimes there is minor perianal itching at night;
• average degree - tearfulness, irritability, bruxism, i.e. the child grinds his teeth, itching in the anus increases at night, visible scratches appear on the skin, abdominal pain appears, and stool is disrupted;
• severe degree - in children it is manifested by severe itching in the anus, the child’s sleep and emotional state are disturbed. The skin around the anus becomes inflamed, there is severe abdominal pain, especially in the navel area, increased bowel movements, bloating, and some patients periodically experience nausea and vomiting.

Depending on the complications, there are two types of the disorder:
• complicated, when there are disorders of the body, disorders of the digestive tract, other organs and other structures;

• uncomplicated, when there are no complications, although the presence of helminthiasis is formally confirmed (by laboratory, objective methods).

ENTEROBIASIS CLINIC

The incubation period for this pathology is 3–6 weeks. During this time, the eggs hatch into larvae that mature into adults, whose life cycle is about 28-30 days. Pinworms parasitize the final section of the small intestine (ileum) and the initial sections of the large intestine (blind and ascending colon). Having reached sexual maturity, males and females mate, after which the males die, and the females move through the large intestine, crawl out through the anus, and lay eggs in the perianal folds. If pinworms reach the appendix, a person may experience an attack of acute pain that resembles colic, as in acute appendicitis.

Children experience severe itching in the anus, the child grinds his teeth, the child's sleep and emotional state are disturbed. The skin around the anus becomes inflamed, abdominal pain is noted, especially in the navel area, increased bowel movements, bloating, and some patients periodically experience nausea and vomiting [7-10].

Due to constant scratching, abrasions and small wounds can form on the skin around the anus, often with suppuration and pyoderma. With a long course of the disease and failure to comply with hygiene rules, abscesses or granulomas can form in the anus, the contents of which contain pinworm eggs [3-6].

In girls, the disease is more severe than in boys, since pinworms can penetrate the genitals, causing the development of vulvitis and inflammation of the urinary tract.

Due to repeated repeated infections, the disease lasts a long time. Parasites change the intestinal biocenosis, due to which the protective function of the microflora decreases, and the number of lactone-negative microorganisms in the intestine increases. The secretion of digestive enzymes deteriorates, which leads to a decrease in the digestive function of the intestine. Lack of nutrients leads to weight loss and delayed physical development of the child [3,11,12,15].

DIAGNOSIS OF ENTEROBIASIS

Diagnosis of enterobiasis includes collecting complaints, anamnesis, examination (particular attention is paid to the perianal area), identifying contact with the source of infection (the presence of people with similar symptoms or a person with an established diagnosis).

The diagnosis of enterobiasis is based on the examination of scrapings from the surface of the skin of the perianal zone to detect pinworm eggs. The material for research is collected with a spatula from the surface of the skin or an imprint is made on adhesive transparent tape (Graham method). Previously, a smear was taken with a cotton swab attached to a stick, but now the use of a spatula or adhesive tape is considered more effective.

In severe cases of the disease, not only eggs, but also large numbers of adult pinworms are found in stool samples taken for analysis. To confirm the diagnosis, samples are taken three times at intervals of one to two days.

A positive test for enterobiasis in a child is the main condition for making a correct diagnosis. You can prescribe a clinical blood test to detect eosinophils, which is necessary in cases where not too much time has passed since the infection.

TREATMENT OF ENTEROBIASIS

Treatment tactics are determined by the age, body weight and individual characteristics of the child's health, as well as the volume and location of helminthic infestation.

Treatment of pinworms in children should be comprehensive and aimed at combating parasites at each phase of development, from eggs, larvae to adults. Simultaneously with the suppression of pathogenic flora, it is necessary to carry out measures aimed at relieving unpleasant symptoms and eliminating the consequences of the vital activity of worms.

Uncomplicated forms of enterobiasis do not require hospital treatment. Indications for hospitalization are the presence of complications, failure of treatment or the impossibility of carrying it out at home.

The primary action is to select effective and maximally safe anthelmintic drugs for a particular child. Medications can be used in various forms: tablets, anal suppositories, syrups, etc. The choice of a specific drug depends on the age and weight of the child.

To reduce itching, dyspepsia and other consequences of pinworms in the body, the following is additionally recommended:

• sorbents that promote the removal of parasites and their metabolic products;
• probiotics that help normalize digestion;
• systemic and local antihistamines – prescribed in situations where a child experiences allergic reactions due to helminthiasis.

If there are complications in the form of dermatoses, eczema, purulent-inflammatory skin diseases, the issue of using antibacterial and other medications is decided in accordance with the indications.

COMPLICATIONS

Complications occur with moderate and severe degrees of enterobiasis. Mostly acute inflammatory phenomena occur: proctitis, paraproctitis, sphincteritis. Autoimmune disorders such as asthma, allergic bronchitis, inflammation of the heart, joints, thyroid gland, skin rash, and dermatitis are also possible.

Pinworms can move to the area of the vaginal vestibule, into the vagina, causing inflammation of the vaginal wall - vulvovaginitis. In areas of damaged skin of the perianal area, bacterial infections can develop, including pyoderma (purulent inflammation of the skin).

Prolonged itching leads to the development of astheno-neurotic syndrome, manifested by sleep disturbances, increased fatigue, irritability, and bedwetting. If pinworms remain in the intestines for a long time (repeated cycles of infection), metabolic disorders are fraught with hypovitaminosis.

FORECASTS AND PREVENTION OF ENTEROBIASIS

Predictions depend on age, the number of helminths, the prevalence of helminthic infestation, its severity and other individual parameters. The pathological condition requires mandatory therapy. This is the best guarantee of recovery. In the vast majority of cases, the disease progresses favorably. Can be completely eliminated.

Primary prevention of enterobiasis includes observing the rules of personal hygiene, and most importantly, timely and thorough hand washing.

Prevention of further spread of infection is carried out by isolating the patient until complete clinical recovery (treatment on average takes 7–14 days). The main measures to prevent enterobiasis are to comply with hygiene requirements:

• mandatory hand washing after visiting the toilet, walking, visiting public places, contacting animals, etc.;

• nail care, getting rid of the habit of biting nails;
• frequent replacement of bed linen, towels, hygiene items;
• washing underwear and bed linen in hot water, followed by ironing and steaming;
• wet cleaning with disinfectants every two to three days.

The patient must have individual utensils and personal hygiene products. Such activities should be continued for 2–3 weeks. To confirm the fact of recovery, the child must be re-examined for enterobiasis 2 weeks after the therapy.

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