

MODERN APPROACH TO DIAGNOSTICS OF HELMINTHIASIS

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According to the World Health Organization, 1.221 billion people in the world suffer from ascariasis, 795 million from trichocephalosis, and 740 million from hookworm infections. Enterobiasis occupies the leading place, accounting for 70% of the total group of helminthiasis, followed by geohelminthiasis (ascariasis), and the third group is biohelminthiasis (opisthorchiasis). The incidence of parasitic diseases in 2024 is estimated at more than 270 per 100,000 population, with enterobiasis incidence at 148.72 per 100,000 population, ascariasis at 18.48 per 100,000, and opisthorchiasis at 17.50. According to WHO statistics, 5 million of the 16 million deaths in the world annually occur due to infectious and parasitic diseases. Parasites are widespread among the world's population, affecting more than 4.5 billion people worldwide. Helminthiasis accounts for 99% of all infestations.

Helminthiasis is the most common mass disease, which has a wide variety of forms and is found almost everywhere. According to the World Health Organization, 1.221 billion people in the world suffer from ascariasis, 795 million from trichocephalosis, and 740 million from hookworm infections. Enterobiasis occupies the leading place, accounting for 70% of the total group of helminthiasis, followed by geohelminthiasis (ascariasis), and the third group is biohelminthiasis (opisthorchiasis). The incidence of parasitic diseases in 2024 was calculated using statistical factors: more than 270 per 100 thousand population, enterobiasis incidence was 148.72 per 100 thousand population, ascariasis - 18.48 per 100 thousand, opisthorchiasis - 17.50. According to WHO statistics, 5 million of the 16 million deaths worldwide each year are due to infectious and parasitic diseases. Parasitoids are widespread among the world's population, affecting more than 4.5 billion people worldwide. Helminthiasis accounts for 99% of all infestations.

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Often, especially in children, muscle twitching, convulsions, epileptic and hysterical seizures, asthma attacks and other serious complications occur. The chronic stage of almost all parasitic diseases has similar symptoms, which makes it impossible to make an accurate diagnosis based on clinical manifestations. In addition, the clinic of helminthiasis is similar to the clinic of many infectious and somatic diseases. By clinical manifestations, it is possible to identify only some invasions that have pathognomonic signs.

In general, a problem-oriented approach should be used in the clinical approach to helminthiasis. In clinical pediatrics, special attention should be paid to anamnestic data (compliance with sanitary and hygienic standards, contact with animals, contact with the ground, games in the sandbox, being in children's groups, children sleeping with their parents, beach volleyball, fishing, traveling to exotic countries, etc.), the above-listed clinical data (paying special attention to the so-called dirty nasolabial triangle), and the diagnosis should be verified by laboratory methods.

The diagnosis of helminthiasis is based solely on the clinical picture and is significantly difficult due to the frequent atypical or erased course of the invasion. Attention should be paid to a carefully collected anamnesis, including epidemiological data, but the most important role in the diagnosis of helminth infection is played by specific diagnostic methods (parasitological, immunological, etc.). Given the predominant location of most of the most common helminths in the digestive tract, feces are most often considered the object of study, but other biological materials (urine, bile, sputum, perianal mucus, blood, muscle) can be studied. Among the diagnostic methods are direct helminthological methods of examining feces (including enrichment methods, etc.), special methods: scraping from perianal folds, adhesive tape for the detection of enterobiasis, etc., examination of sputum (roundworm, etc.), bile (giardia, etc.), urine (genitourinary schistosomiasis), tissue biopsies (*Trichinella*), etc. In a general clinical blood test, attention should be paid to anemia. (diphlobothriasis, trichocephalosis, taeniasis, etc.), eosinophilia (toxocariasis, trichinosis, ascariasis, strontyloidiasis, etc.), thick blood smear (filariasis) is examined.

Instrumental diagnostics sometimes provide significant benefits in detecting invasion, for example, radiation diagnostic methods (chest X-ray, abdominal ultrasound, brain neuroimaging methods, etc.), ophthalmoscopy (eye cystoscopy).

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