



Clinical and Epidemiological Characteristics of Gimenolepidosis and Teniarinhosis in Children

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Abstract: When comparing the clinical signs of the patients studied in the article, the astheno-vegetative symptoms were significantly higher ($P < 0.001$) in patients with hymenolepidosis than in patients with teniarinhosis with memory loss, increased nervousness, depression, blurred vision, and blinking. In patients with teniarinhosis, symptoms such as weight loss, malaise, fainting, abdominal pain, and vomiting were reported to be reliably high ($P < 0.001$).

Keywords: helminthiasis, hymenolepidosis, teniarinhosis, children, clinic.

Relevance. According to the World Health Organization, about 5 billion people in the world are affected by protozoal diseases and helminthiasis, i.e. the overwhelming majority of the inhabitants of our planet [1]. According to the World Health Organization (WHO), of the 50 million people who die in the world every year, more than 16 million people die from infectious and parasitic diseases (WHO, 2005). In the structure of infectious diseases, the fourth place is occupied by parasitic diseases [2, 3, 4, 5].

Recently, in many countries, including in the countries of the Central Asian region, due to the deterioration of the epidemiological situation under the influence of anthropogenic factors (hypermigration of the population, hyper-urbanization, deterioration of the socio-ecological situation, etc.), the risk of infection of children increases [6, 7].

Helminthiasis are one of the most common diseases in Uzbekistan, accounting for more than 90% of the total number of parasitic diseases. The level of long-term incidence of the population remains stably high. Annually, in the country, more than 200 thousand infested are registered. Today the number of infested people is about 200 thousand people, 70% are children under 14 years old. The prevalence of certain types of helminths varies by region. Enterobiasis and hymenolepidosis are ubiquitous, both in urban and rural areas. The incidence rate of tapeworm infection among children is low, but the Khorezm region is an intense focus of tapeworm infection [8, 9]. Parasitic diseases are characterized by a relatively slow development, chronic course, and often long-term compensation. It is these features that are mainly the reason for the underestimation of the medico-social significance of these diseases [10,11]. Parasitic diseases cause mental and physical retardation in children [12], reduce resistance to infectious and somatic diseases [13, 14], cause allergization of the body, inducing secondary immunodeficiencies [13]. Under the influence of helminths, homeostasis is disturbed in the body, pathological and immunopathological processes develop, which are of an adaptive nature.

Purpose. Study of the clinical and epidemiological features of hymenolepiasis and teniarhynchiasis in hospitalized children of different ages.

Materials and methods

To solve the set tasks, a clinical examination of 178 patients with intestinal parasitosis in children aged 4 to 18 years was carried out in the Bukhara, Khorezm regional infectious diseases hospital and the private clinic "Amal". The diagnosis of hymenolepidosis and teniarinchosis was confirmed by the detection of *Hymenolepis nana* eggs and *Taeniasaginata* eggs during triple coproscopy; in some cases, teniarinchiasis was diagnosed when a segment of *Taeniasaginata* was detected, which was excreted (actively or passively) from the intestine. Parasitological examination of the stool was carried out 3 times with a break of 3-4 days. The diagnosis of hymenolepiasis was confirmed by the detection of helminth eggs in freshly excreted feces. The diagnosis of teniarhynchosis was confirmed by the detection of eggs during coproscopy and isolated segments.

Results and discussion. To solve the set tasks, clinical and epidemiological examinations of 178 patients with intestinal cestodosis (hymenolepidosis and teniarinchosis) in children aged 4 to 18 years were carried out. They were divided into 2 groups based on the etiological factor. In the hymenolepiasis group (group 1) of 120 patients by age, children were distributed as follows: from 4 years to 7 years - 52 (43.3%) children, from 8 years to 11 years - 33 (27.6%) and from 12 years to 15 years 19 (15.8%), 16 years to 18 years 16 (13.3%). 54 boys (45.0%) and 66 girls (55.0%). In the group of teniarinchosis (group 2), out of 58 children by age were distributed from 8 years to 11 years - 13 (22.4%) and from 12 years to 15 years 17 (29.5%), from 16 years to 18 years 28 (48.3%). They were distributed by sex as follows: 22 (37.9%) boys and 36 (62.1%) girls.

Of the total number of patients in group 1, 68 (56.7%) patients were urban and 52 (53.3%) - rural residents, and group 2, respectively, 19 (32.8%) and 39 (67.2%). All parasitic patients observed were hospitalized several months after the onset of the disease. In all cases, the diagnosis is confirmed parasitologically.

All children have studied in detail the medical history, epidemiological history, past and concomitant diseases of the child and parents, the somatic status of the child was determined. According to the indications, the children were examined by consultants of various specialties and underwent special studies depending on their pathology. Laboratory research methods included a general analysis of blood, urine, and feces. The analysis of the results of the epidemiological history in sick children of the 1st group showed that the main path of the spread of parasitosis is contact-household. Epidemiological history shows that 2 - groups of eating raw meat, when cutting carcasses, when using not enough thermally processed meat and meat products.

In these patients, the parasites were found microscopically on routine examination, but detailed examination revealed mild parasite-like symptoms. The frequency of detection of clinical signs are shown in the table.

Table. The frequency of clinical signs in patients with hymenolepiasis and teniarinchiasis.

Symptoms	Hymenolepidosis (abc:%)	Тенярињхоз(abc:%)	Symptoms	Hymenolepidosis (abc:%)	Тенярињхоз(abc:%)
General weakness	110 (91,7%)	55 (95,0%)	Epileptiform seizures	14 (11,7%)	-
Malaise	78 (65,0%)	54 (93,1%)	Nausea	27 (22,5%)	9 (15,6%)
Fatigue	57 (47,5%)	56 (96,6%)	Vomiting	5 (4,2%)	12 (20,7%)
Bad dream	62 (51,7%)	31 (53,4%)	Heartburn	10 (8,4%)	16 (27,6%)
Bad memory	96 (80,0%)	23 (39,7%)	Weight loss	76 (63,3%)	56 (96,6%)
Dizziness	71 (59,2%)	30 (51,7%)	Hypersalivation	82 (68,3%)	52 (89,7%)
Headache	82 (68,3%)	32 (55,2%)	Stomachache	62 (51,7%)	54 (93,1%)
Increased irritability	76 (63,3%)	23 (39,7%)	Stool instability	32 (26,7%)	18 (31,0%)
Depressed mood	69 (57,5%)	21 (36,2%)	Allergic dermatoses	64 (53,3%)	15 (25,9%)
Blinking eyes	18 (15,0%)	2 (3,4%)	Absent-mindedness	15 (12,5%)	10 (17,2%)
Chills	17 (14,2%)	4 (6,9%)	Eosinophilia	100 (83,3%)	45 (77,6%)
Frowning eyebrows	21 (17,5%)	5 (8,6%)	Leukopenia	87 (72,5%)	52 (89,7%)
Fainting	6 (5,0%)	18 (31,0%)	Anemia	110 (91,7%)	57 (98,3%)
Convulsive muscle twitching	32 (26,7%)	6 (10,3%)	Brittle nails and hair	52 (43,3%)	31 (53,4%)
Bruxism	66 (55,0%)	14 (24,1%)	Onychophagia	32 (26,7%)	18 (31,0%)

These tables show that most children with hymenolepidosis had astheno-neurotic symptoms, which are distributed as follows: in 80.0% of patients, poor memory was found, in 68.3% of hypersalivation during sleep, in 63.3% of increased irritability, in 57.5% of patients had a depressed mood, 55.0% of patients had bruxism, and symptoms such as blinking of the eyes, seizures, frowning of eyebrows, epileptiform seizures were recorded in a median of 11.7% - 26.7%.

Dyspeptic symptoms such as nausea were recorded in 22.5%, vomiting in 4.2%, diarrhea in 8.4%, lower abdominal pain in 51.7%, and stool instability in 26.7% of patients in group 1.

Of the symptoms of intoxication, headaches were observed in 68.3% of children, general weakness in 91.7%, fatigue in 47.5%, dizziness in 59.2% of patients. Indicators of allergic manifestation, such as eosinophilia were in 83.3%, allergic dermatoses in 53.3% of patients with hymenolepidosis.

When analyzing the clinical manifestations in patients with teniarinchiasis, it was found that most children had astheno-neurotic symptoms, which are distributed as follows: 39.7% of patients had poor memory, 89.7% had hypersalivation during sleep, 39.7% had increased irritability, depressed mood in 36.2% of patients, bruxism in 24.1% of patients, and symptoms such as blinking of the eyes, seizures, frowning of the eyebrows were recorded in a median of 3.4% - 24.1%. Epileptiform seizures were not recorded in any case.

Dyspeptic symptoms such as nausea were recorded in 15.6%, vomiting in 20.7%, unstable stool in 31.0%, lower abdominal pain in 93.1% of patients in group 2.

Of the symptoms of intoxication, headaches were observed in 55.2.3% of children, general weakness in 95.0%, fatigue in 96.6%, dizziness in 51.7% of patients. Indicators of allergic manifestation such as eosinophilia were 77.6%, allergic dermatoses in 25.9% of patients with teniarinchiasis.

When studying the clinical manifestations in two observed groups of patients, astheno-neurotic symptoms - poor memory, increased irritability, depressed mood, blinking of eyes and seizures were significantly higher ($P < 0.001$) in patients of group 1 than in patients of group 2. Symptoms such as weight loss, malaise, faintness, abdominal pain, and vomiting were significantly higher ($P < 0.001$) in patients with teniarinchiasis than in patients of the first group.

Conclusions

Thus, the astheno-neurotic symptoms that were noted in helminthiasis were more pronounced in patients with hymenolipidosis than in teniarinchiasis. Symptoms such as abdominal pain, weight loss, malaise, and fatigue were common in patients with teniarinchiasis.

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