



FEATURES OF CLINICAL MANIFESTATIONS OF LAMBLIOSIS IN CHILDREN

Ibatova Sh.M.¹, Abdurasulov FP², Ruzikulov NY³

^{1,2,3}Samarkand State Medical Institute, Republic of Uzbekistan

Ибатова Ш.М., Абдурасулов Ф.П., Рузикулов Н.Ё.

ABSTRACT

Giardiasis is one of the most common diseases in the world. A very urgent problem of giardiasis for Uzbekistan [1]. The clinical manifestations of giardiasis are diverse, but lesions of the gastrointestinal tract prevail, which is associated with the localization of parasites in the duodenum and jejunum. Along with severe clinical manifestations of giardiasis, latent forms are also described. Isolation of lamblia without clinical manifestations is often used as an argument for evaluating this condition as a healthy carrier of protozoa. We observed 62 patients with a clinically pronounced form of giardiasis at the age from 3 to 15 years. Compared with the subclinical form, the patients of this group had more intense abdominal pain, manifestations of "gastric" and "intestinal" dyspepsia. In addition, some patients had relatively low body weight and growth retardation, which was evidence in favor of malabsorption of nutrients. The maximum localization of pain on palpation of the abdomen was of interest.

We studied patients with latent, subclinical and clinical forms of giardiasis. Children with a latent form of the disease did not show any complaints. In subclinical and clinical forms of giardiasis, abdominal pain, intestinal and gastric dyspepsia were observed. With giardiasis, children are prescribed dietary and drug therapy.

KEY WORDS: *patients, giardiasis, research, parasites, clinical forms, coprogram.*

INTRODUCTION

In childhood, a disease such as giardiasis, which is caused by the simplest parasites, is often found. Features of the child's immune system, which is immature and low acidity of gastric juice are the reasons that determine the susceptibility of children to this infection.

Until now, giardiasis is one of the most common invasions in the world. According to the WHO expert committee in Asia, Africa and Latin America, approximately 50 thousand people fall ill with giardiasis annually. A very urgent problem of giardiasis for Uzbekistan [1]. The clinical manifestations of giardiasis are varied, but lesions of the gastrointestinal tract prevail, which is associated with the localization of parasites in the duodenum and jejunum [2,5]. Along with severe clinical manifestations of giardiasis, latent forms are also described. Isolation of lamblia without clinical manifestations is often used as an argument for

evaluating this condition as a healthy carrier of protozoa. However, with the accumulation of data on morphological changes in the microvilli of intestinal epithelial cells during invasion, as well as immunological changes in the body with giardiasis, the possibility of their pathogenic effect becomes obvious even with asymptomatic carriage [3]. Studies carried out in giardia carriers revealed both functional and morphological changes [5]. So, during histochemical examination of the mucous membrane of the small intestine in children who excrete lamblia and do not have clinical manifestations, endoscopic and histological examinations of biopsy specimens of the mucous membrane revealed focal or widespread hyperemia, edema of the duodenal mucosa in 74% of the examined. It should be noted that the study of the clinical manifestations of giardiasis is relevant for our region.

**PURPOSE OF THE STUDY**

Study of the features of the clinical manifestations of giardiasis in children.

MATERIALS AND METHODS

We observed 36 children with latent, 78 children with subclinical and 62 with clinical forms of giardiasis. The examination of children was carried out at the Samarkand Multidisciplinary Children's Medical Center. The children were between 3 and 15 years old. Diagnosis of giardiasis was based on complaints, anamnesis data, clinical manifestations of the disease, as well as an extended coprogram. Determination of protozoa in feces was carried out by the method of formalin - ether enrichment. The stool study technique was carried out using the traditional method.

RESEARCH RESULTS AND THEIR DISCUSSION

Based on the severity of clinical manifestations, we have identified latent, subclinical

and clinical forms of giardiasis. Among the various forms of giardiasis invasion, its asymptomatic form occupies a special place. We examined 36 children with a latent form of the disease at the age from 3 to 15 years. The examined children did not show any complaints, and no pathology was revealed during the general clinical examination. The physical development of the patients corresponded to their age.

In the observed children, cyst secretion ranged from 0.5 to 0.7 and averaged 0.6 cysts per field of view. In the subclinical form of giardiasis, which includes 78 children aged 3 to 15 years, mild abdominal pain was most often observed (in 66 out of 78-84.6%), intestinal syndrome (in 52-66.7%) and less often "gastric" (in 25-32.1%) dyspepsia. This symptomatology, in general, is typical for giardiasis and is explained by the fact that it leads to the development of duodenitis and enteritis. This is also evidenced by the peculiarities of the localization of abdominal pain on palpation, which is reflected in table 1.

Table 1
Punctum maximum abdominal pain with subclinical giardiasis

Punctum Maximum Pain	Number of Children
Underlay	6 (7,6%)
In the pyloroduodenal region	28 (35,8%)
In the umbilical region	7 (8,9%)
Sublayer + pyloroduodenal region	19 (24,3%)
Lining + right hypochondrium	2 (2,5%)
Sublayer + Treitz angle area	2 (2,5%)
Subcutaneous + along the large intestine	1 (1,2%)
Sublayer + left iliac region	1 (1,2%)

As can be seen from Table 1, with the subclinical form of giardiasis, abdominal pain on palpation was mainly localized in the pyloroduodenal (35.8%) and pyloroduodenal zones (24.3%), which is characteristic of duodenitis (49.5%). Less commonly, pain was noted near the navel (8.9%) and the pads in 6 patients. In the children we observed, late pains occurred on an empty stomach or appeared 1-2 hours after eating. The pains are usually nagging and dull. Only 3 children out of 78 (3.8%) had the Moinigan pain rhythm (pain-food-relief).

Along with a mildly expressed pain syndrome, the children we observed with a subclinical form had symptoms of dyspepsia. Nausea was most often noted (in 11 children out of 78 - 14.1%), which is characteristic of an increase in pressure in the duodenum with a simultaneous decrease in the pressure gradient between the stomach and duodenum. Less often in children,

belching was noted (8 patients - 10.2%), in the genesis of which a certain importance is attached to an increase in pressure in the stomach cavity due to an increase in its tone or pyloric spasm. And only 2 patients had vomiting and 2 patients had heartburn. Only 2 patients showed a decrease in appetite. Along with the signs of the so-called "gastric" dyspepsia, the symptoms of "intestinal" dyspepsia were observed in children 2 times more often. Among the latter, unstable stools were most often observed (in 38 out of 78 patients - 48.7%). In these children, loose stools were also more often noted, the feces were homogeneous, light yellow in color without pathological impurities. 6 (7.6%) patients had flatulence, 6 (7.6%) had constipation, and 2 patients (2.5%) had a rumbling in the abdomen. In 3 patients (3.8%), the lower edge of the liver protruded along the anterior axillary and midclavicular lines by 4 cm



and was slightly painful on palpation. These children suffered from viral hepatitis a year ago.

The physical development of children with a subclinical form of giardiasis was assessed by the centile table method. The body weight in children with the subclinical form of giardiasis was more often average (in 64 out of 78-82%), and below the average in 8 out of 78 (10.2%), above the average in 4 out of 78 (5.1%) children. Pallor of the skin was noted in only one child (1.2%). From the side of the skeletal system, respiratory organs, cardiovascular system in patients with subclinical form of giardiasis there were no changes.

Two children complained of headaches, and 4 patients were irritable. Cyst secretion in the subclinical form of giardiasis ranged from 0.7 to 2.2 and averaged 1.5 cysts per field of vision.

We observed 62 patients with a clinically pronounced form of giardiasis at the age from 3 to 15 years. Compared with the subclinical form, the patients of this group had more intense abdominal pain, manifestations of "gastric" and "intestinal" dyspepsia. In addition, some patients had relatively low body weight and growth retardation, which was evidence in favor of malabsorption of nutrients. Of interest was the maximum localization of pain on palpation of the abdomen (Table 2).

Table 2
Punctum Maximum Abdominal Pain in Clinical Form of Giardiasis

Punctum Maximum Pain	Number of children
Подложечкой	8 (12,9%)
Underlayment	30 (48,3%)
Paraumbilic region	9 (14,5%)
Substrate + pyloroduodenal area	12 (19,3%)
Lining + right hypochondrium	2 (3,2%)
Substrate + Treitz angle area	- (0%)
Lining + along the large intestine	1 (1,6%)
Pad + left iliac region	- (0%)

As can be seen from Table 2, most often the maximum pain on palpation of the abdomen in children with the clinical form of giardiasis was localized in the pyloroduodenal and epigastric + pyloroduodenal regions (in 42 of 62 children - 67.7%), which is also characteristic of the duodenal lesion. Patients with the clinical form of giardiasis had late pain appearing on an empty stomach or 1-2 hours after eating. Although the pain was dull, it was more prolonged than in the subclinical form [7].

Moinigan's pain rhythm was observed only in 5 out of 62 (8%) patients. Significantly more often than in the subclinical form, manifestations of "gastric" dyspepsia were observed. So, nausea was in 18 of 62 (29%) children, belching in 11 (17.7%), heartburn in 6 (9.6%). A decrease in appetite was noted in 26 children. The enteral syndrome was more pronounced. Thus, 55 out of 62 (88.7%) children had unstable stools. In 6 (9.6%) flatulence and in 3 (4.8%) rumbling in the abdomen.

A scatological study in the feces revealed leukocytes, epithelial cells, crystals of fatty acids. In 17 out of 62 (27.4%), the stool is liquid, with the presence of muscle fibers, connective tissue, plant fiber (duodenal syndrome) [4,6,8]. In 28 out of 62 (12.9%) patients, feces were liquid, abundant, yellow-gray, ointment.

The study determined neutral fats, starch grains, muscle fibers, which is characteristic of pancreatic insufficiency. Only 2 out of 62 (3.2%) had

mucus in their stool. In 13 out of 62 (20.9%) children with the clinical form of giardiasis, we revealed an enlarged liver. It was known from the anamnesis that these children had previously suffered from viral hepatitis. The average body weight was in 37 of 62 children (59.7%), below average in 17 (27.4%), and in 7 low (11.2%). Naturally, with the clinical form of giardiasis, more often (in 24 out of 62 -38.7%) disharmonious development was noted.

Pallor of the skin was noted in 41 out of 62 (66.1%), and in 2 patients (3.2%), a large-spotted rash of an allergic nature (such as urticaria) was noted on the trunk, chest, abdomen. On the part of the skeletal system and respiratory organs, no pathology was revealed in the patients studied by us. In 3 of 62 (4.8%) children, a gentle systolic murmur at the apex of the heart of a functional nature was heard. The border of the relative dullness of the heart was within the age norm. In addition, patients often complained of weakness (11 out of 62 - 17.7%), irritability (18 children - 29%), less often sleep disturbance and headache. With a clinically pronounced form of giardiasis, cyst secretion ranged from 2.2 to 2.8, averaging 2.5 cysts per field of view.

CONCLUSIONS

Thus, the studies carried out have shown that giardiasis, especially in children, is clinically manifested by a variety of symptoms: from giardiasis



to severe clinical forms. It is clinically advisable to distinguish the latent, subclinical and clinical form of giardiasis. Along with a unified anti-lambliasis drug therapy, diet therapy is required.

REFERENCES

1. Alimzhanova R.Yu., Dekhkan - Khodzhaeva N.A. *Giardiasis in combination with helminthic invasion // Actual problems of medical parasitology: Collection of scientific papers - Tashkent, 1987. - P.63-65.*
2. Bandurina T.Yu., Samarina V.N. *Giardiasis in children. St. Petersburg-2002. 40 s.*
3. Ramazanova A.B., Ibatova Sh.M., Abdukadyrova N.B. *Variants of clinical manifestations of giardiasis in children. International scientific Journal "Problems of Biology and Medicine". 2021, №1.1 (126), - P.342-344.*
4. Sergiev V.P., Lobzin Yu.V., Kozlov S.S. *Human parasitic diseases. // SPb. - 2008. - S. 124-131.*
5. Semenov A.M. *On the question of giardiasis and its classification. In the book: Questions of medical parasitology. L. : Publishing house of VMA named after S.M. Kirov, 1995. -- S. 48-56.*
6. Tkachenko MA *The role of helicobacteriosis and giardiasis in the genesis of recurrent abdominal pain syndrome in children: author. dis. Cand. honey. sciences. - SPb., 2001.21s.*
7. Turakhodzhaeva M.G. *Clinical and morphological characteristics of gastric lesions in giardiasis: author. dis. cand. honey. sciences. Moscow, 1980.-21s.*
8. Hugo D. Lujan, Maria C. Touz. *Protein trafficking in Giardia lamblia. // Cellular Microbiology. 2003. - 5 (7). - P. 427-34.*