Variants Of Clinical Manifestations Of Giardiasis In Children

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ABSTRACT

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. Along with severe clinical manifestations of giardiasis, latent forms are also described. Isolation of Giardia without clinical manifestations is often used as an argument for assessing this condition as a healthy carriage of protozoa. Under our supervision there were 36 children with latent, 78 children with subclinical and 62 with clinical forms of giardiasis. The children were examined at the Samarkand Multidisciplinary Children's Medical Center. The age of the children ranged from 3 to 15 years. Diagnosis of giardiasis was based on complaints, anamnesis, clinical manifestations of giardiasis, as well as an expanded coprogram for the determination of protozoa in feces using the formalin-ether enrichment method. Giardiasis, especially in children, is clinically manifested in a variety of forms - from pure giardia carriers to severe forms. It is clinically advisable to distinguish latent, subclinical and clinical forms of giardiasis, because Along with a single anti-giardiasis drug therapy, dietary treatment is required.

Keywords: giardiasis, helminths, children, pain, clinical manifestations, diagnosis.

Introduction

Until now, giardiasis is one of the most common invasions on the globe. According to the WHO expert committee, approximately 50 thousand people fall ill with giardiasis every year in Asia, Africa and Latin America. Giardiasis is a very pressing problem for the CIS countries, especially for Uzbekistan [1-5]. 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 [6,9,11,14]. Along with severe clinical manifestations of giardiasis, latent forms are also described. Isolation of Giardia without clinical manifestations is often used as an argument for assessing this condition as a healthy carriage of protozoa. However, as data accumulates on the morphological changes in the microvilli of intestinal epithelial cells during invasion, as well as immunological changes in the body during giardiasis, the possibility of their pathogenic effects even with asymptomatic carriage becomes obvious [7,9,12]. Studies conducted in Giardia carriers revealed both functional and morphological changes [8,10,13]. Thus, in a histochemical study of the mucous membrane of the small intestine in children who excreted Giardia and had no clinical manifestations, endoscopic and

histological studies of biopsy specimens of the mucous membrane revealed focal or widespread hyperemia and edema of the duodenal mucosa in 74% of those examined. It should be noted that the study of the clinical manifestations of giardiasis is relevant for our region.

Purpose Of The Study

To study the variants of clinical manifestations of giardiasis in children.

Materials And Methods

Under our supervision there were 36 children with latent, 78 children with subclinical and 62 with clinical forms of giardiasis. The children were examined at the Samarkand Multidisciplinary Children's Medical Center. The age of the children ranged from 3 to 15 years. Diagnosis of giardiasis was based on complaints, anamnesis, clinical manifestations of giardiasis, as well as an expanded coprogram for the determination of protozoa in feces using the formalin-ether enrichment method. In addition, a method of approximate calculation of the intensity of Giardia excretion was used. The stool examination technique was carried out using the traditional method.

Research Results And Discussion

In our work, based on the severity of clinical manifestations, we identified latent, subclinical and clinical forms of giardiasis. Among the various forms of giardiasis invasion, its asymptomatic form occupies a special place. We observed 36 children with a latent form aged 3 to 15 years. The observed children did not make any complaints, and a general clinical examination did not reveal any pathology. The physical development of the patients corresponded to their age. In these children, cyst discharge ranged from 0.5 to 0.7 and averaged 0.6 cysts per field of view. In the subclinical form of giardiasis, to which we included 78 children aged 3 to 15 years, mild abdominal pain was most often observed (in 66 of 78-84.6%), “intestinal” syndrome (in 52-66.7 %) and less often “gastric” (in 25-32.1%) dyspepsia. Such symptoms are, in general, typical of giardiasis and are 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 during palpation, which is reflected in Table 1.

Table 1. Punctum maximum abdominal pain in the subclinical form of giardiasis

Punctum maximum pain	Number of children
Epigastric	6 (7,6%)
In the pyloroduodenal region	28 (35,8%)
Periumbilical region	7 (8,9%)
Epigastric + pyloroduodenal area	19 (24,3%)
Epigastric + right hypochondrium	2 (2,5%)
Epigastric region+Treitz angle area	2 (2,5%)
Epigastric region + along the large intestine	1 (1,2%)

Epigastric region + left iliac region	1 (1,2%)

As can be seen from Table 1, in the subclinical form of giardiasis, abdominal pain during palpation was mainly localized in the pyloroduodenal (35.8%) and epigastric + pyloroduodenal zones (24.3%), which is characteristic of duodenitis (49.5%). Less often, pain was noted near the navel (8.9%) and in the epigastric region in 6. In the children we observed, the pain was late, occurring on an empty stomach or appearing 1-2 hours after eating. The pain is usually nagging and dull. Only 3 children out of 78 (3.8%) had the Moynihan rhythm of pain (pain-eating-relief). Along with mildly expressed pain syndrome, the children we observed with the subclinical form had dyspeptic symptoms. The most common symptom was nausea in 11 children out of 78 (14.1%), which is characterized by an increase in pressure in the duodenum with a simultaneous decrease in the pressure gradient between the stomach and duodenum. Less common is belching (in 8 patients – 10.2%), in the genesis of which a certain significance is attached to an increase in pressure in the gastric cavity due to increased tone or pyloric spasm. And only 2 patients had vomiting and 2 had heartburn. Only 2 patients showed a decrease in appetite. Along with the signs of so-called “gastric” dyspepsia, symptoms were observed 2 times more often "intestinal" dyspepsia. Among the latter, unstable stool was most often observed (in 38 of 78 patients - 48.7%).

These children also more often had loose stools; the stool was homogeneous, light yellow in color, without pathological impurities (blood and mucus). Only 6 (7.6%) patients suffered from flatulence, 6 (7.6%) had constipation, and 2 patients (2.5%) had rumbling in the abdomen. In 3 patients (3.8%), the lower edge of the liver protruded along the anterior axillary and midclavicular line by 4 cm and was slightly painful on palpation. These children suffered from viral hepatitis a year ago. The physical development of children with subclinical giardiasis was assessed using centile tables. Body weight in children with subclinical giardiasis was more often average (64 out of 78-82%), below average in 8 out of 78 (10.2%), above average in 4 out of 78 (5.1%) children . Pale skin was noted in only one child (1.2%). The skeletal system, respiratory organs, and cardiovascular system in patients with subclinical giardiasis were not changed. Two children complained of headaches, 4 patients complained of irritability. Cyst secretion in the subclinical form ranged from 0.7 to 2.2, with an average of 1.5 cysts per visual field. We observed 62 patients with a clinically pronounced form of giardiasis aged 3 to 15 years. Compared to the subclinical form, patients in this group had more intense abdominal pain and manifestations of “gastric” and “intestinal” dyspepsia in all children. In addition, some patients had relatively low body weight and stunted growth, which suggested malabsorption of nutrients. Of interest was the maximum localization of pain during palpation of the abdomen (Table 2).

Table 2. Punctum maximum abdominal pain in the clinical form of giardiasis

Punctum maximum pain	Number of children
Epigastric	8 (12,9%)
In the pyloroduodenal region	30 (48,3%)
Periumbilical region	9 (14,5%)
Epigastric + pyloroduodenal area	12 (19,3%)
Epigastric + right hypochondrium	2 (3,2%)
Epigastric region+Treitz angle area	- (0%)
Epigastric region + along the large intestine	1 (1,6%)

Epigastric region + 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 areas in 42 of 62 children (67.7%), which is also characteristic of damage to the duodenum. 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 longer lasting than in the subclinical form [7]. Moynihan's rhythm of pain was observed in only 5 of 62 (8%) patients. Significantly more often than in the subclinical form, manifestations of "gastric" dyspepsia were observed. So, nausea was present in 18 of 62 (29%) children, belching in 11 (17.7%), and heartburn in 6 (9.6%). 26 children had a decrease in appetite. Enteric syndrome was more pronounced. Thus, 55 out of 62 (88.7%) children had unstable stools. 6 (9.6%) had flatulence and 3 (4.8%) had rumbling in the stomach. A scatological examination revealed leukocytes, epithelial cells, and fatty acid crystals in the stool. 17 out of 62 (27.4%) had loose stools with the presence of muscle fibers, connective tissue, and plant fiber (duodenal syndrome) [8]. In 28 of 62 (12.9%) patients, the stools are liquid, profuse, yellow-gray, and ointment-like. The study determined neutral fats, starch grains, and muscle fibers, which is characteristic of pancreatic insufficiency. Only 2 out of 62 (3.2%) had mucus in their stool. We detected liver enlargement in 13 out of 62 (20.9%) children with clinical giardiasis. From the anamnesis it is known that these children had previously suffered viral hepatitis. Body weight was average in 37 of 62 children (59.7%), below average in 17 (27.4%), and low in 7 (11.2%). Naturally, in the clinical form of giardiasis, disharmonious development was observed more often (in 24 out of 62 -38.7%) (the difference in corridors is 2 intervals). Pale skin was noted in 41 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 torso, chest, and abdomen. No pathology was identified from the skeletal system and respiratory organs in the patients we studied. In 3 out of 62 (4.8%) children, a gentle systolic murmur of a functional nature was heard at the apex of the heart. The limits of relative dullness are within the age norm. In addition, patients often complained of weakness (11 out of 62 - 17.7%), irritability (18 children - 29%), less often sleep disturbances and headaches. In the clinically expressed form of giardiasis, cyst secretion ranged from 2.2 to 2.8, averaging 2.5 cysts per field of view.

Conclusion

Thus, giardiasis, especially in children, is clinically manifested in variety - from pure giardia carriers to severe forms. It is clinically advisable to distinguish latent, subclinical and clinical forms of giardiasis, because Along with a single anti-giardiasis drug therapy, dietary treatment is required.

Literature

1. Aleksandrova V.A., Odintseva V.E. Comparative characteristics of the diagnosis and treatment of helminth-protozoal infestations in children // Attending physician. - 2008. No. 10. - P. 4-9.
2. Brooker S Estimating the global distribution and disease burden of intestinal nematode infections: adding up the numbers – a review. J Parasitol 2010; 40 (10): 1137–44.
3. Ibatova Sh.M., Mamatkulova F.Kh. Mamatkulova D.Kh. Giardiasis in Children. International Journal of Medical Science and Clinical Research Studies. Volume 02 Issue 03 March 2022 P.251-253.
4. Ibatova Sh.M., Abdurasulov F.P., Ruzikulov N.Y. Features of clinical manifestations of lambliosis in children. EPRA International Journal of Research and Development (IJRD). Volume: 7 | Issue: 1 | January 2022 P. 38-41.
5. Ibatova Sh.M., Mamatkulova F.Kh., Gaffarova M.T., Jalolova Sh. A. Complex

therapy of giardiasis in children. Scientific abstract journal New day in medicine. No. 6 (44) 2022. P. 128-132.
6. Ibatova Sh. M., F. Kh. Mamatkulova, N. B. Abdukadirova, Yu. A. Rakhmonov, M. M. Kodirova. Risk Factors for Development of Broncho-Ostructive Syndrome in Children. International Journal of Current Research and Review. Vol 12. Issue 23 December 2020.-P. 3-6.
7. Ibatova Sh.M., Mamatkulova F.Kh., Rakhmonov Y.A., Shukurova D.B., Kodirova M.M. Assessment of the Effectiveness of Treatment of Rachit in Children by Gas-Liquid Chromatography. International Journal of Current Research and Review. Vol 13, Issue 06, 20 March 2021. P.64-66.
8. Sh.M. Ibatova, F.Kh. Mamatkulova, D.S. Islamova. Efficiency of combined application of apricot oil and aevit as a regulator of lipase activity of blood serum in children with vitamin D-deficiency rickets. Journal of Critical Reviews. // ISSN- 2394-5125. VOL 7, ISSUE 11, 2020. P.1266-1274.
9. Ibatova Sh.M., Achilova F.A. THERAPY OF GIARDIASIS IN CHILDREN. American Journal of Technology and Applied Sciences. Jan 5 2024. Volume 20, P.14-19.
10. Ibatova Sh.M., Mukhamadiev N.Q., Abdurasulov F.P. Clinical manifestations of giambliasis in children. Central Asian Journal of Medical and Natural Sciences. Volume: 03 Issue: 02. Mar-Apr 2022. P. 306-308
11. Shoira M. Ibatova, Feruza Kh. Mamatkulova, Gulnoz A. Kholikova, Dilrabo Kh. Mamatkulova. Some indicators of lipid and phosphorus-calcium metabolism in children with rackitis receiving conventional treatment. International Journal of Health Sciences, 6(S4), 2022. 3628–3638
12. Sh. M. Ibatova, D. S. Islamova, F. Kh. Mamatkulova. Features of clinical manifestations of giardiasis in children. Scientific and practical journal “Doctor akhborotnomasi” No. 1 (102) 2022, pp. 36-39.
13. 13.Research priorities for helminth infections. World Health Organization, TDR Disease Reference Group on Helminth Infections. World Health Organ Tech Rep Ser 2012; 972: xv–xvii, 1–174, back cover.
14. Pullan RL, Smith JL, Jasrasaria R, Brooker S Global numbers of infection and disease burden of soil transmitted helminth infections in 2010. J. Parasit Vectors 2014; 7:37.