



## COMPLEX THERAPY OF GIAMBLIASIS IN CHILDREN

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### Annotation

Giardiasis is an urgent problem in children, since its clinical manifestations are often masked by various types of gastroenterological pathology, including functional disorders of the gastrointestinal tract, aggravating their course, syndromes of excessive growth of intestinal microflora in the small intestine, malabsorption, multivitamin deficiency, as well as the development of allergic diseases. - recurrent urticaria, atopic dermatitis, which, without adequate therapy, acquire a relapsing course. At the same time, the lack of verification of the diagnosis does not allow for adequate therapy.

**Keywords:** giardiasis, patients, clinical variants, therapy.

### Introduction

Giardiasis is one of the most common helminthic invasions in the world [1-5]. According to the World Health Organization (WHO), giardiasis affects approximately 20-25% of children in the world [9-11]. Giardia ranks third in prevalence after enterobiasis and ascariasis (WHO, 2006). Previously, it was believed that giardiasis occurs in endemic areas of Asia, Africa, Latin America with poorly developed infrastructure. In connection with the development of tourism in developing countries, giardiasis is found everywhere, often together with pathogens of intestinal infections and helminthiases, such as *Hymenolepis nana*, *Strongyloides stercoralis*, *Taenia* spp. etc.

### Purpose of the Study

To develop a complex therapy for giardiasis in children.

### Material and Research Methods

Under observation were 78 children with giardiasis aged 3 to 15 years. The physical development of patients corresponded to their age. In these children, cystic excretion ranged from 0.5 to 0.7, on average, it was 0.6 cysts per field of view.





In the subclinical form of giardiasis, which included children aged 3 to 15 years, mild abdominal pain was often observed in 66 out of 78 (84.6%), "intestinal" dyspepsia syndrome in 52 (66.7%), symptoms "gastric" dyspepsia in 25 (31.1%) patients. Such symptoms are generally typical for giardiasis and are explained by the fact that protozoa vegetate in the duodenum and small intestine, which leads to the development of duodenitis and enteritis [12,14,16].

Treatment of giardiasis in children, along with the appointment of anti-giardia medications, also included therapeutic nutrition, increased hygiene knowledge to prevent reinvasion of giardia, since the latter are very easily transmitted from person to person by the fecal-oral route with water, food, close household contact [6-8,13,15,17]. Children with a latent form were treated on an outpatient basis if they did not have concomitant diseases. Children with a subclinical form were hospitalized due to mild abdominal pain and enteral syndrome to clarify the diagnosis. All children with a clinically expressed form were hospitalized. Depending on the severity of the patient and enteral syndrome, a motor regimen was also prescribed. With severe pain or enteral syndrome, bed rest was prescribed, and in other cases, general.

With severe pain in the abdomen, antispasmodic drugs were prescribed at an age dosage (no-shpa, papaverine, etc.).

## Research Results and Discussion

Due to the great need of patients with giardiasis in various vitamins, multivitamins were prescribed. In addition, vitamin A was additionally prescribed, which contributes to the repair of the intestinal mucosa. We compared the effectiveness of some anti-giardia drugs (Table 1).

Table 1. The average duration of clinical symptoms in children with clinically pronounced form of giardiasis, depending on the drugs used

Name symptoms	Medications		
	aminoquinol	Furazolidone	Furazolidone + metronidazole
Abdominal pain during palpation	12.8±0.8	14.0±1.1	10.2±0.4
Dyspeptic phenomena:			
nausea	8.0±0.4	9.0±0.6	6.0±0.1
vomiting	1.0±0.2	3±0.4	1±0.2
heartburn	4±0.3	5±0.2	2±0.2
belching	3±0.2	5±0.7	2±0.1
Decreased appetite	8±0.2	10±0.6	6±0.3
Flatulence and rumbling in the stomach	7±0.8	11±0.4	5±0.7
Liquid stool	6±0.4	12±0.8	6±0.4

As can be seen from Table 1, the duration of pain was the least with the combination of furazolidone with metronidazole and longer (14.0 + 1.1 days) with treatment with furazolidone alone.



Dyspeptic phenomena that existed before the start of treatment disappeared under the influence of aminoquinol during the first 8 days, with the combination of furazolidone with metronidazole in the first 6 days and with monotherapy with furazolidone, they lasted for 2 weeks. Side effects were detected in 18 patients treated with giardiacid drugs (Table 2).

Table 2. Side effects when using furazolidone, aminoquinol, metronidazole in children with giardiasis

Drug	Total number of patients	Number of patients with side effects	The nature and frequency of side effects phenomena				
			dizziness	nausea	vomiting	pruritus	rash
Furazolidone:	58	11					
Of these, with:							
latent		3	1	1	-	1	-
subclinical		4	1	1	-	1	1
clinical		4	1	2	-	1	-
aminoquinol	44	4					
Of these, with:							
latent	1	-					
subclinical	2	-					
clinical	1	-					
Furazolidone + metronidazole	74	3					
Of these, with:							
latent		-					
subclinical		1	-	1	-	-	-
clinical		2	1	1	-	-	-

As can be seen from Table. 2, side effects were observed during treatment with furazolidone in 11 of 58 patients (18.9%), with aminoquinol in 4 | out of 44 (9.0%) and with the combination of furazolidone with metronidazole in 3 out of 74 (4.0%) children.

In the treatment with furazolidone, release from Giardia was observed in 82.6 patients, with daily control viewing of feces for a month.

In the treatment of children with a latent form with furazolidone, the disappearance of Giardia was observed in 13 out of 15 (86.6%) children, with a subclinical form in 18 out of 20 (90.0%) children and with a clinically pronounced form in 7 out of 11 (63.6%) children with lambda.

In the treatment with aminoquinol, release from Giardia was observed in 67.8% of patients. In the treatment of 9 children with a latent form of giardiasis with aminoquinol, the disappearance of giardia was observed in 6 out of 9 (66.6%) children, in the subclinical form in 9 out of 11 (81.8%) and in 4 out of 8 (50.0%) with clinically expressed form of giardiasis.



In the combined treatment with furazolidone and metronidazole, cyst excretion stopped in 97.0% of patients. In the combined treatment with furazolidone and metronidazole in 12 children with a latent form, the disappearance of Giardia was observed in 11 out of 12 (91.6%), with subclinical in 46 out of 47 (97.8%) and in 42 out of 43 (97.6%) with clinically expressed form of giardiasis. Reinvasion was noted in the remaining 1.4% of patients. This is due to the fact that with persistent cyst excretion, there is a change in the activity of T-lymphocytes, a decrease in immunoglobulins A and the appearance of antibodies to native deoxyribonucleic acid.

Therefore, a number of authors recommend the immunomodulator - levamisole in the complex treatment of giardiasis in order to increase the protective properties of the body.

## Conclusion

Thus, the treatment of giardiasis must be carried out comprehensively. Furazolidone in combination with metronidazole has the greatest anti-giardia activity. This treatment stops cyst secretion in 98.6% of children with giardiasis. In subclinical, especially clinical form, foods containing lactose and sucrose should be excluded from the diet. It is advisable to use easily digestible fats (vegetable fat quota should be increased by reducing animal fats).

Considering that Giardia infection occurs mainly by the fecal-oral route, strict adherence to the sanitary and hygienic regime in the family and children's groups is necessary.

## Literature

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