



## Modern Approaches to Treatment of Chronic Giardiasis

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**Abstract:** This paper presents patients were examined according to a single scheme, which included a set of clinical and laboratory studies, a survey and examination of the patient. Clinical manifestations of the disease were assessed before the start of treatment, on the 5th day of therapy and immediately after the end of the course of treatment. The study group included 300 patients, including 197 aged 18 to 45 years (Group 1) and 103 children aged 5 to 18 years (Group 2). An analysis of clinical and anamnestic features showed that the leading symptoms in patients with giardiasis were lesions of the gastrointestinal tract in 65.9% of cases in adults and in 39.8% of cases in children. In second place are violations of the general condition in the form of asthenovegetative syndrome: in 58.4% of cases in adults and in 66.0% in children. In third place in terms of importance was identified toxic-allergic syndrome: in 42.6% of cases in adults and in 78.6% of cases in children. The observed patients in this group received traditional treatment with antiparasitic drugs. According to the coprological study of treated patients, re-isolation of Giardia cysts was noted: in adult patients - 62.4%, and in children - 65%. The effectiveness of treatment in adult patients is 37.6%, and in children - 35.0%.

**Keywords:** giardiasis, clintab, phytopreparation.

**Introduction.** According to the World Health Organization (WHO), of the 50 million people who die each year worldwide, more than 16 million die from infectious and parasitic diseases (WHO, 2005). Parasitic diseases occupy the fourth place in the structure of infectious diseases [1, 2, 3, 5].

Recently, in many countries, including 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, hyperurbanization, deterioration of the socio-ecological situation, etc.), the risk of infection of children has increased [4].

Giardiasis is one of the most common parasitic diseases in both children and adults and is detected in all countries of the world. According to the World Health Organization (WHO), 10–20% of the world's population is infested with Giardia [6].

Giardiasis is a disease that is common in all countries of the world, in particular in the USA it affects 7.4% of the population, in Norway - 3.3%, in Russia from 12 to 35%, in Ukraine - 10%. Incidence rates on average range from 0.5 to 18% [5,7].

For specific therapy of giardiasis in children, several groups of antiparasitic drugs are used: a group of nitroimidazoles (metronidazole, tinidazole, ornidazole, secnidazole); derivatives of nitrofurans (nifuratel, furazolidone); benzimidazole derivatives (albendazole, mebendazole) [6, 7]. It should be noted that the literature data on the effectiveness of anti-giardia drugs differ significantly. Recovery from giardiasis was stated in children who received macmiror, 80.0%, metronidazole - 70% [6]. According to other authors, the effectiveness of monotherapy of giardiasis in children with the most commonly used antiparasitic drugs is very low. Giardia eradication was achieved with monotherapy with macmiror in 21.4% of patients, with metronidazole in 12.5%, and with nemosol in 33% [8, 9,10].

Despite great progress in the creation of highly effective antiparasitic drugs, the treatment of giardiasis remains one of the unsolved and complex problems.

**Aim.** Analysis of modern methods of treatment of giardiasis, improvement and increase in the effectiveness of etiotropic therapy for giardiasis infection.

**Materials and methods.** Inclusion criteria: age from 18 to 45 years, confirmation of giardiasis by the results of a scatological study, no history of allergic reactions to drugs of the nitroimidazole group. All patients were examined according to a single scheme, which included a set of clinical and laboratory studies, a survey and examination of the patient. Clinical manifestations of the disease were assessed before the start of treatment, on the 5th day of therapy and immediately after the end of the course of treatment. Determination of clinical and biochemical parameters of blood before the start of treatment and immediately after the end of the course of treatment. The diagnosis was verified on the basis of clinical, anamnestic and laboratory data (fecal coproscopy).

**Results and discussion.** A comparative analysis of clinical and laboratory parameters in the studied patients with giardiasis before traditional treatment was carried out. The study group included 300 patients, including 197 aged 18 to 45 years (Group 1) and 103 children aged 5 to 18 years (Group 2). An analysis of clinical and anamnestic features showed that the leading symptoms in patients with giardiasis were lesions of the gastrointestinal tract in 65.9% of cases in adults and in 39.8% of cases in children.

In second place are violations of the general condition in the form of asthenovegetative syndrome: in 58.4% of cases in adults and in 66.0% in children. In third place in terms of importance was identified toxic-allergic syndrome: in 42.6% of cases in adults and in 78.6% of cases in children. The observed patients in this group received traditional treatment with antiparasitic drugs. After the traditional treatment, asthenovegetative and toxic-allergic syndromes remained practically unchanged in both adults and children. After completing the course of treatment with the listed drugs, we conducted a control parasitological examination to confirm the effectiveness of the treatment.

According to the coprological study of treated patients, re-isolation of Giardia cysts was noted: in adult patients - 62.4%, and in children - 65%. The effectiveness of treatment in adult patients is 37.6%, and in children - 35.0%. This served as the basis for further research and the search for effective methods of therapy. In this regard, of no small interest is the use of phytopreparations, the advantage of which is their low toxicity and the possibility of long-term use without significant side effects. In order to select the optimal treatment regimen and evaluate its clinical effectiveness, patients with chronic giardiasis were divided into 2 groups.

The main group consisted of 50 patients with acute and chronic giardiasis who took the drug "Clintab" 1-3 tablets 3 times a day, the course of treatment was 15 days. The comparison group consisted of 50

patients treated with the drug "Albendazole", which has antibacterial and antiprotozoal effects at a dose of (400 mg) 1 tablet 2 times a day, the course of treatment was 5 days.

Analyzing the clinical symptoms in the studied patients, we identified violations of the general condition in the form of asthenovegetative syndrome (76% and 70% of cases); syndrome of lesions of the gastrointestinal tract (64% and 54%); toxic-allergic syndrome (33% and 38%) - in the main and control groups, respectively.

After taking a 15-day course of the drug "Clintab" in all patients, there was an improvement in the general condition and well-being (in the form of a decrease in weakness), appetite improved. In the control group, after taking Albendazole for 7 days, the dynamics of symptoms was insignificant. In the group of patients treated with "Clintab", the manifestations of asthenovegetative syndrome are less pronounced than in the control group. The phenomena of weakness, headache in patients of the main group are half as much as in the control group. The dynamics of changes in the indicators of toxic-allergic syndrome in the main group is more dynamic, there is a complete relief of itching of the skin.

From the manifestation of the syndrome of gastrointestinal lesions in the main group, there was a positive trend. Symptoms such as furred tongue, belching, heartburn, nausea, vomiting, feeling of fullness in the stomach, flatulence and rumbling in the intestines have halved, and the nature of the stool has returned to normal. In the control group, the dynamics of the above symptoms was insignificant. At the time of discharge from the hospital, when examining feces for protozoa and when probing two days after the drug was discontinued, almost all patients in the main group had sanitation from Giardia cysts compared with the control group. The effectiveness of treatment in the group of patients treated with "Clintab" was 85%, while in the control group it was only 62%. In 38% of patients in the control group, re-isolation of Giardia cysts was noted, in the main group - only in 15%.

The percentage of elimination of Giardia cysts in the main group is 4 times higher than in the control group, which indicates the high efficiency of the Clintab preparation used. Due to the fact that the effectiveness of treatment in the control group did not exceed 38%, patients were prescribed repeated treatment. Subsequently, 21 days after treatment, the effectiveness of anti-giardia therapy was evaluated based on the results of a repeated study of feces for Giardia cysts. In the main group, scatological examination of feces revealed re-isolation of Giardia cysts only in 2 (4%), and in the control group in 8 (16%).

In the future, 3 months after treatment, the effectiveness of anti-giardia therapy was evaluated based on the results of a repeated study of feces for Giardia cysts. In the main group, scatological examination of feces showed positive stool scoping in 8% of cases in the main group and 16%, respectively, in the control group. The presented indicators of sanitation of the body from the protozoa, which are 92% in the main group versus 84% in the control group, along with indicators of the prospective effect 3 months after the treatment (positive coproscopy 2% and 16%, respectively) indicate a high effect of therapy with the drug "Clintab" in albendazole combinations.

### Conclusions:

1. On the basis of the study, we found that the standard anthelmintic treatment gives a positive trend in the elimination of Giardia, but not to the full extent, since there was a re-isolation of Giardia cysts in adults in 62%, and in children in 65%, and therefore the effectiveness treatment in adult patients did not exceed 37%, and in children - 35%.
2. The presented indicators of sanitation of the body from protozoa, 3 months after the treatment, which are 92% in the main group versus 84% in the control group (positive coproscopy 2% and 16%, respectively), indicate a high effect of therapy with the drug "Clintab" in combination with albendazole.

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