

Actual Problems of Echinococcosis of Liver and Parasitic Worm in Human Parasitocenosis

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Abstract: In order to improve the results of therapy in patients with echinococcal cysts of the liver by studying, the combined treatment of parasitocenosis has been developed and recommended. An in-depth study was carried out in 114 patients with echinococcal cysts located in different segments of the liver.

Key words: *ascariasis, echinococcosis, parasitocenosis.*

Relevance. The Republic of Uzbekistan is the most densely populated region in Central Asia. Unfortunately, our country is an endemic focus of the incidence of echinococcosis [1]. Many foreign researchers, as well as local scientists, note that the disease is common in areas where agriculture and animal husbandry are developed. The disease develops and is transmitted due to poor hygiene [2]. While there is a scientific basis for these views, our views are somewhat different. Because in African countries, South Asian countries or in northern regions, 80-90% of the population is engaged in agriculture and animal husbandry, but in these regions the incidence of echinococcosis is below average statistics. The climate of Uzbekistan is continental and sharply changing continental. The formation of the continental climate of Uzbekistan is influenced by its geographical position and the associated solar radiation, atmospheric circulation. Prolonged droughts include hot summers, short rainy springs, and erratic winters [3]. The average July temperature in the country ranges from 26 ° C in the north to 30 ° C in the south. The average January temperature drops to minus 8 ° C in the north and 0 ° C in the south. The lowest air temperature is minus 38 ° C (on the Ustyurt Plain). Because of this changing climate, we believe it plays a key role in the development of echinococcal infection. Based on the results of modern scientific literature, Latin American countries (Peru, Chile, Bolivia, Argentina, etc.) are also endemic foci of echinococcosis. Everyone knows that the climate of these regions is similar to that of Uzbekistan. Based on our observations, we can conclude that climate change creates favorable conditions for the development of echinococcal oncocysts and larvae, in addition, dry air is a key factor in the spread of this disease. An important factor in the development of liver echinococcosis and the results of the immediate and long-term period of treatment depends on the parasitocenosis. Indeed, when the body is infected with echinococcal oncocysts, it is impossible to exclude the

infection of other parasites or pathogenic microorganisms. Despite the development of surgery in the treatment of echinococcosis, treating surgeons pay little attention to infection with other pathogenic microorganisms.

In the human body, several species of various parasites of plant and animal origin can be localized simultaneously in the form of associations. This community is called parasitocenosis [4]. It arose as a result of the relationship of organisms in nature in the process of their joint evolution and consists of joints. A parasitocenosis is a community of various types of parasites that live in an organ or throughout the host's body. The association may include helminths, protozoa, viruses, bacteria, chlamydia, fungi, etc. Parasitocenosis has long been known and studied by infectious disease parasitologists, but during the surgical treatment of liver echinococcosis, surgeons pay little attention to the treatment of other parasites in the body or do not pay due attention ...

Geohelminthiasis. Ascariasis (*Ascaris lumbricoides*). The female of the parasite is 25-40 cm long, larger than the male. It has an elongated tail end, with a conical appendage and two large papillae (suction cups) on the inner side of the body. At the head end of the roundworm is the mouth opening, surrounded by three large cuticular lips (suction cups). Eggs enter the soil with human excreta. Eggs can be stored in soil for up to 20 years or more. At high humidity, larvae develop in them to the invasive stage within 24 days to several months.

Ascaris life cycle. From the soil, eggs can get onto hands, vegetables, berries, with which they are brought into the mouth. In the intestine, the larvae hatch from the eggs, penetrate through its wall into the venous or lymphatic bed and reach the lungs, break through the wall of the alveoli and go out into the airways. Maturation takes place in the lungs, then young worms migrate through the bronchioles into the pharynx, where they are swallowed and finally enter the small intestine. An adult worm reaches 25-30 cm in length, the life span of a helminth in the human body is about 1 year [5].

Unfortunately, the outcome of the immediate and long-term results to one degree or another depends on the parasitic resistance of the organism. In our study, we studied patients in whom, in addition to liver echinococcosis, there was infection with other pathogenic microorganisms, in particular ascariasis.

In this regard, the aim of this study was to improve the results of therapy in patients with echinococcal cysts of the liver by studying and combined treatment of parasitocenosis.

Material and methods. In the period from 2017 to 2021, 114 patients with echinococcal cysts located in different segments of the liver were hospitalized in the department of planned surgery of the city clinical hospital No. 1 and in private clinics Invivo, Saba darmon in Tashkent. At the time of admission, the patients underwent a general blood and urine test, biochemical tests to determine the functional state of the liver, and an ECG. The main diagnostic method was ultrasound examination (ultrasound), which was carried out before surgery, in the postoperative period and at discharge of patients from the hospital. In doubtful cases, multi-spiral computed tomography (MSCT) and magnetic resonance imaging (MRI) were performed. The age of the patients was from 20 to 71 years, the average age was 38.4 ± 1.6 years. There were 72 (63.2%) women and 42 (36.8%) men. The patients were divided into two groups depending on the method of surgical treatment. Group 1 (comparison group) consisted of 69 (60.5%) patients with echinococcal cysts, in whom the preoperative preparation and interoperative action was carried out according to the standard. Group 2 (main group) included 45 (39.5%) patients with echinococcal cysts, for whom the preoperative preparation and interoperative action differed from the comparison group.

In the main group, in addition to standard examinations and treatments, immunological parameters of blood plasma were studied in order to determine specific

antibodies to roundworm larvae. At the present stage of development of immunology, the ability of the body to develop immunity to worms is being studied. Scientists became interested in helminths not so long ago, but have already established a host response system to helminthiasis. When worms start in the body, the human immune system begins to produce antibodies to fight off intruders. The danger of worms is that over time they adapt to the internal environment of the host, the host stops responding or reacts poorly to invasions, and tolerance is developed [6,7];

Results and discussion. In the main group, 45 (39.5%) patients had no clinical indication for the determination of helmentosis. Clinical signs of ascariasis are similar to liver echinococcosis and the surgeon pays little attention to parasitocenosis against the background of liver echinococcosis. An immunological study to determine specific antibodies to roundworm larvae showed that in 5 (4.3%) patients of the main group, the immunotest showed a sharply positive result, in 8 (7%) patients a weakly positive result, the remaining 32 (28%) patients a negative result. 13 (11.4%) patients who tested positive were referred to a parasitologist for further examination and treatment. After examination and treatment, all 45 (39.5%) patients in the preoperative period received chemotherapy for 15 days. The use of albendazole at a dose of 10 mg / kg / day in divided doses as an adjunct therapy to surgical treatment significantly improved the results in our patients. Cyst viability during surgery was significantly reduced in patients in whom albendazole was used before surgery. In addition to preoperative preparation, we used the interoperative use of liquid 4% albendazole for the treatment of echinococcal cysts, its fibrous capsules and adjacent tissues. From the patients of the main group, who received albendazole preoperatively for 15 days and interoperative use for the treatment of the cavity.

Morris et al. [8] treated 16 patients with preoperative albendazole at a dose of 10 mg / kg / day for a variable period from 1 week to 1 month. Of 14 patients who received albendazole 1 month or more before surgery, only one had a viable protocol. In contrast, each of the two remaining patients, who received therapy for only one and three weeks, had liver disease at the time of surgery. Horton [9] treated 500 patients with 800 mg of albendazole per day in cycles of 28 days with a drug-free interval of 2 weeks between cycles for an average duration of 2.5 cycles. The relapse rate was 18.75% over a follow-up period of 5-6 months in patients who did not receive albendazole, while preoperative use of albendazole was found to significantly reduce the risk of relapse to 4.16%.

During the immediate postoperative period of patients of the main group, who received albendazole therapy in the preoperative and interoperative periods, bed days decreased due to the acceleration of rehabilitation and recovery of the body. This is consistent with observations made by leading experts in hepatology and parasitology.

Conclusions.

1. Supplementing the surgical intervention with a course of general chemotherapy in the preoperative and postoperative period, the identification of parasitocenosis in the preoperative period by the criteria we developed, made it possible to reduce the immediate postoperative complications from 33.3% to 28.6%, and long-term results from 5.5% to 2, 4%. The number of patients with the safety of the physical and mental components of health, returned to active labor activity, with high vital activity has increased by 2.86 times.
2. The use of liquid 4% albendazole for intraoperative flushing of the echinococcal cavity and adjacent tissues with a liquid mixture with an antiseptic solution in the treatment of liver echinococcosis is a highly effective combination of surgical and chemotherapeutic

methods of treatment, which provides a complete cure for patients with parasitocenos and prevents the development of postoperative complications and relapses of diseases.

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