

METHOD OF PREVENTION OF POSTOPERATIVE COMPLICATIONS OF LIVER ECHINOCOCCOSIS

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Abstract: The main risk factor for complications in percutaneous echinococcectomy is non-compliance with the intervention methodology, the use of the Seldinger method and the use of ineffective intraoperative germicides.

Key words: echinococcosis, liver, cysts, relapse,

The literature data of recent decades confirm the fact that, due to various circumstances, echinococcal disease does not tend to sharply decrease in Central Asian regions [[1,3,5,7,30]. Despite the fact that the only radical method of treating echinococcosis remains surgical, unfortunately, in some cases it has its drawbacks, among which can be attributed a high frequency (3.3-54%) of postoperative relapse [25,26,27,28].

It is natural that the leading factors leading to postoperative relapse of the disease include purely the choice of surgical tactics (radical and palliative operations), and the stages of AKI treatment (the destructive ability of the antiparasitic solution and compliance with its exposure), which must be taken into account when conducting primary surgical interventions in ECP [12,14,16,18,20,21,22,23,24]. Consequently, total pericystectomy and various variants of liver resection in ECP, against the background of massive adhesive and infiltrative inflammatory process, as well as other general somatic factors (severity of the condition, concomitant pathologies), is fraught with an increase in the frequency of intra- and postoperative complications, and even adverse outcomes [9,11,13,15,29].

It should be noted that during the period of mastering the technique, many clinics encountered negative phenomena, such as high rates of intra- and postoperative complications, the unreasonableness of expanding indications for minimally invasive interventions, as well as non-compliance with the intervention methodology itself. The latter also concerns the use of percutaneous interventions in patients with ECP, which is captivating with its apparent simplicity and ease, as indicated by the high frequency of its complications, reaching from 3.0% to 25.0% of cases [2,4,6,8,10]. Moreover, certain technical difficulties may naturally arise with recurrent echinococcosis of the liver, which is confirmed by single analyses of the causes of these complications and methods of their timely diagnosis, as well as the lack of preventive measures.

In this connection, the urgency of the problem of minimally invasive echinococcectomy in patients with recurrent echinococcal liver cysts served as the basis for this study.

The purpose of the study. Improvement of the results of surgical treatment of recurrent echinococcosis of the liver.

The purpose of the study. Improving the results of treatment of patients with liver echinococcosis by developing an algorithm for the prevention and treatment of complications during percutaneous echinococcectomy.

Materials and methods. For the purpose of the study, 111 inpatient records of patients who underwent minimally invasive interventions for liver echinococcosis in the clinic of Faculty and hospital surgery of the Abu Ali Ibn Sina Bukhara Medical Institute were analyzed.

We applied this technique to 87 patients. All interventions were performed in a specialized operating room equipped with standard operating equipment, as well as an ultrasound machine and an X-ray telescope. As protection from radiation, the entire operating and anesthesiological teams used X-ray protective aprons and collars. The operation was performed under intravenous anesthesia in the supine position of the patient. Before the operation, the patient underwent a polypositional ultrasound examination to determine the safe path of access. The trajectory was chosen in such a way that there were no blood vessels, bile ducts, hollow organs, pleural sinus in the path of the needle movement. It was also considered important to have a layer of liver parenchyma above the cyst at the point of entry of the instrument into it. With a partially extraparenchymatous cyst location, the entrance to it through a free, uncovered liver parenchyma, the edge carries the danger of leakage of hydatid fluid into the abdominal cavity and an increased risk of relapse.

As the results of the study show, even conditionally radical interventions, such as pericystectomy, do not guarantee a relapse of the disease, which was noted in 4.2% (n=3) cases. An important factor in the recurrence of echinococcosis is a relapse of a "local" nature, which once again confirms the presence of technical and tactical errors during the initial intervention for EP. It was a "local relapse" that was noted in 59 (83.1%) cases, and a relapse not associated with primary surgery – in 12 (16.9%). The number of ECS in primary echinococcectomies from the liver also has an important value in the frequency of recurrence of EP. Because according to the literature, multiple ECS, are one of the predictors of disease recurrence. In our study of echinococcectomies from the liver, single cysts were noted in 36 (50.7%), the presence of 2 ECS in 7 (9.8%), and multiple ECS in 28 (39.4%) patients, which once again confirms the fact of literature data on the recurrence of EP. The most frequent periods of relapse (47.9%) occurred from 2 to 5 years, including 2, 3 and 5-fold relapses during this period were 8.4%, 5.6% and 2.8%, respectively. In 24 (33.8%) patients, relapse of the disease was diagnosed in the period from 1 to 2 years, which in 18 (25.3%) cases, the frequency was one-time. In terms up to 1 year after primary echinococcectomy from the liver, 13 (18.3%) patients had a relapse of the disease. When collecting anamnesis, we particularly focused on receiving antiparasitic

chemotherapy to patients in the postoperative period, which in our study amounted to 94.4% (n=67), i.e. only 4 (5.6%) patients received a one-time course of albendazole.

According to the distribution of patients by localization, 64.8% (n=46) of REC were localized in the right lobe, 26.8% (n=19) in the left lobe, and 8.4% (n=6) in both lobes. At the same time, the REC with a volume of more than 1000.0 ml was 4.2% (n=3), up to 1000.0 ml – 14.1% (n=10). The main part of patients (81.7%) consisted of RECs with a volume of up to 500.0 ml. It should be noted that when choosing the PAIR method in patients with RAP, the volume of EC was important, because it was the volume of EC that determined the tactics of surgical treatment, i.e. the puncture method, puncture-aspiration and/or determining the number and diameter of drains in the residual cavity at the same time. In 23 (32.4%) cases, patients had suppuration of RAP. The breakthrough of RECP into the bile ducts, with the phenomena of parasitic MJ, occurred in 3 (4.2%) patients, that a two-stage treatment tactic was undertaken: the first stage was EPST, the second stage was the PAIR method. Uncomplicated forms of RAP were found in the remaining 45 (63.4%) observations. In our study, the so-called "asymptomatic" course of RECP was observed in 45 (63.4%) patients and only 26 (36.6%) patients had characteristic clinical manifestations due to complications such as suppuration (n=23) and parasitic mechanical jaundice (n=3). The most frequent clinical symptoms were discomfort in the right hypochondrium (47.9%). Hepatomegaly was observed in 13 (18.3%) patients, and unspecified abdominal pain – in 12 (16.9%). Periodic increase in body temperature, accompanied by weakness and general malaise, occurred in 23 (32.4%) patients with RECP. Other symptoms of REOBP were allergic reactions, jaundice and a picture of acute pancreatitis.

A detailed analysis of the anamnesis of the disease and a description of the discharge of patients after the primary operation determined that initially out of 71 patients with ECP, 35 (49.3%) had a picture of multiple echinococcosis of the liver (7 patients with the presence of two ECS were introduced into this group), 68 (95.8%) patients underwent palliative surgery, only 4 (5.6%) patients received chemotherapy in the postoperative period (while the prescription and number of courses are not determined).

Judging by the literature data, when studying clinical and laboratory blood parameters in patients with uncomplicated form of RECP, significant changes are not noted. In our study, changes in blood parameters were mainly noted in patients with complicated forms of ECP, in particular, 46.5% (n=33) had varying degrees of anemia, which was characterized by low levels of erythrocytes (3.3 ± 0.1) and hemoglobin (108.0 ± 1.7 g/l). Hypoproteinemia was considered to be natural in patients with complicated forms of ECP, such as suppuration (n=22) and breakthrough in HDL (n=3), which amounted to 37.3% (57.1 ± 1.1 g/l). In 3 (4.2%) patients with a breakthrough of recurrent EC into extrahepatic LC, pronounced changes in blood biochemical parameters were noted.

In 3 (4.2%) patients with a breakthrough of recurrent EC into extrahepatic LC, pronounced changes in blood biochemical parameters were noted. Hyperbilirubinemia reached a level of 67.8 ± 0.5 mmol/l, against which an increase in the level of cytolytic enzymes was observed (AsAt -0.798 ± 0.034 $\mu\text{m/ml/g}$, AlAt -0.609 ± 0.021 $\mu\text{m/ml/g}$), which respectively required both pathogenetically justified preoperative preparation and individual two-stage surgical treatment tactics. Ultrasound examination over the past 20 years has been considered one of the informative methods of radiation diagnostics, with EP and is used everywhere. The correct interpretation of recurrent EC before surgery is considered important in the choice of surgical treatment, which makes it most likely to make the right decision. Postoperative recurrent ECP, according to these classifications, in 9 (12.7%) cases were expressed by the absence (CL) of ultrasound pathognomonic signs of parasitic lesion. In 36 (50.7%) cases, clear boundaries of cysts of various sizes (CE1, CE2) with the presence of daughter cysts were determined against the background of a living parasite. Ultrasound signs of violation of the integrity of the cyst and detachment of the chitinous membrane (CE3) and the presence of a dead parasite (CE4, CE5), respectively, were found in 4.2% and 32.4% of observations.

Conclusion: 1. To reduce the frequency of postoperative recurrence of liver echinococcosis, surgical treatment in specialized departments is recommended, followed by mandatory appropriate chemotherapy and medical examination of patients.

2. The introduction into practice of the developed algorithm for the diagnosis of postoperative recurrence of liver echinococcosis, allows timely detection of pathology and early minimally invasive methods of their correction.

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