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FEATURES OF DIAGNOSIS OF SURGICAL TACTICS IN PATIENTS WITH RECURRENT LIVER ECHINOCOCCOSIS

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Summary. The use of the developed algorithm for diagnosing recurrent liver echinococcosis in clinical practice allows for timely detection of the disease and early surgical interventions.

Repeated operations for recurrent liver echinococcosis should be performed in specialized departments by hepatosurgeons in the amount of economical resection and subtotal pericystectomy.

Key words: liver echinococcosis, relapse, reinvasion, forgotten untreated cysts.

Relevance. Liver echinococcosis is a severe chronic parasitic disease that is widespread in the Central Asian region, including the Republic of Uzbekistan. Today, the only radical treatment method is surgery [1,20,26,27]. The disadvantages of the surgical method of treating this disease include the occurrence of relapses, the frequency of which ranges from 3.3 to 54%.Diagnosis of recurrent echinococcus of the liver (REH) in some cases presents significant difficulties, since the issues of repeated reinvasion and forgotten untreated cysts remain unresolved, and the long, often atypical clinical course of the disease creates certain difficulties in the modern diagnosis of ECH and leads to the development of severe complications, posing a threat to the lives of patients [1,2,3,4,5,6,7,8].

It should be noted that to date, many aspects related to the causes of relapse of the disease, the characteristics of its clinical manifestations, as well as methods of prevention and treatment have not been resolved and require further study [2,23,24,25].There is an opinion that relapses of the disease occur due to germinal elements penetrating the fibrous capsule, as well as due to residual cavities, which prompts many surgeons to abandon organ-preserving operations and resort to liver resection [1,20]. However, radical operations for REP, as a rule, are performed in difficult conditions of adhesive and infiltrative-inflammatory processes, altered anatomy and often against the background of factors aggravating the patient's condition, which leads to an increase in the frequency of postoperative complications (bleeding, bile leakage) and deaths [3,9,10,11,12,13,14,15].

The issues of choosing methods of prevention and methods of performing repeated surgical intervention for REP deserve close attention. In this regard, it is important

to carry out comprehensive preventive measures, including intraoperative and postoperative measures with the use of modern antiseptics and antiparasitic agents when performing organ-preserving and surgical interventions aimed at radical removal of hydatid cysts along with the liver area.

The above arguments served as the basis for conducting this study concerning this very important and pressing problem of modern hepatosurgery of recurrent liver echinococcus.

The purpose of the study is to improve the results of surgical treatment of recurrent liver echinococcosis.

Materials and methods. This work is based on an analysis of the results of a comprehensive examination and treatment of 84 patients with REP who were hospitalized in the regional hospital of the city of Bukhara from 2021 to 2023. Of this number, 71 (84.5%) patients, after primary surgical interventions, were admitted to the clinic from various medical institutions of the Republic of Uzbekistan and 13 (15.5%) patients were operated on in the clinic. Thus, out of 84 patients with REP, 47 (56%) were urban residents, and 37 (44%) were rural residents, which was due to the increased migration of the rural population over the past 10-15 years.

Research results and discussion. In 52(62%) cases the patients were male, and in 32(38%) they were female. 70 (83%) patients were of working age, which was not only of great medical importance, but also social. A detailed analysis of the medical history of primary operations for echinococcosis showed that in 97-98% palliative methods of operation were performed. In 82 (97.6%) cases, patients had previously undergone so-called palliative non-radical methods of echinococcectomy. Only in 2 (2.4%) cases conditional radical interventions in the form of subtotal pericystectomy were performed.

The timing of the appearance of REP varied and, above all, depended on the nature of the surgical interventions performed and the postoperative chemotherapy administered.

Relapses of the disease were most often observed within a period of up to 1 year - in 37 (44.0%) patients, while in 8 observations there was a 3-fold relapse of the disease in the past. In a period of 1 to 2 years, 23 (27.4%) patients in 7 observations had a 5-fold relapse of the disease. In the long term (2 to 5 years), relapses of the disease occurred in 24 (28.6%) patients, while 11 patients had a 2-fold relapse of the disease. Analysis of the study showed that 79 (94.1%) of 84 patients did not receive postoperative antiparasitic chemotherapy. When patients with REP were admitted, great importance was attached to the location and volume of recurrent

echinococcal liver. According to the localization of REP in 53 (63.1%) cases, they were in the right lobe of the liver, in 19 (22.6%) - in the left and in 12 (14.3%) cases, echinococcal cysts were localized in the right and left lobes of the liver.

When determining the size of identified recurrent cysts, we were guided by the volume and diameter of the hydatid cyst and the volume of the residual cavity. Thus, in 17 (20.2%) cases, recurrent echinococcal cysts had small (from 4 to 6 cm) sizes, the volume of the residual cavity was up to 500 ml, the average cyst size (from 6 cm to 10 cm) with a volume from 500 ml to 800 ml occurred in 37 (44.0%) patients, in 21 (25.0%) patients large recurrent echinococcal cysts (size from 10 cm to 20 cm) with a residual cavity volume of 800-1000 ml were observed, in 9 (10 .7%) patients had giant recurrent hydatid cysts (cyst size over 20 cm) with a residual cavity volume over 1000 ml.

When choosing the method and extent of reoperation for REP, the presence of concomitant diseases, which in some cases had a negative impact during the postoperative period, was of great importance. In 37 (44%) cases out of 84 (100%) patients with REP, concomitant diseases were observed.

To identify the presence of REP, anamnestic data is needed, which allows us to identify predictors of the risk of REP, such as: Multiple nature of liver echinococcosis during the primary operation (36%). Presence of a dead parasite and a complicated cyst (73%). Past palliative primary interventions (98%). Lack of data on postoperative anti-relapse chemotherapy (41%). Lack of data on follow-up (dynamic ultrasound, serological tests) (70%).

A detailed and comprehensive preoperative study of clinical and laboratory data for REP did not reveal significant changes. Only with the development of complications from the hydatid cyst, caused by its inflammation and suppuration, changes in laboratory data were detected.

In 52(62%) cases, anemia of varying severity was observed during REP, characterized by a decrease in the number of red blood cells and hemoglobin level (108.3±3.0 g/l). Along with this, in 32 (38%) observations a decrease in the level of total protein (58.4±1.4 g/l) was noted, especially during suppuration of the hydatid cyst. Pronounced changes were found in biochemical parameters in large and giant recurrent cysts (n=12) of the liver. Against the background of moderate hyperbilirubinemia (19.2±0.6 μmol/l), an increase in the level of cytolytic enzymes was observed (AcAt-0.760±0.029 μm/ml/g, AlAt-0.560±0.019 μm/ml/g).

The results of clinical and biochemical laboratory parameters indicate that patients with REP had liver dysfunction before repeated surgery. To diagnose REP, ultrasound was performed in all 84 (100%) patients. Comprehensive ultrasound

made it possible not only to diagnose the presence of a recurrent hydatid cyst, but also to determine the size and number of cysts, its contents, developed complications from the cyst, as well as its relationship with intrahepatic tubular structures and liver segments. For the distribution of liver echinococcosis, we used the WHO classification of ultrasound images adopted in 2003. In type I (n=26), simple recurrent hydatid cysts looked like anechoic neoplasms of spherical or oval shape with clear boundaries. In type II, hydatid cysts occurred in 28 (33.3%) patients with REP, and large single-chamber fluid containing formations with thin septa was observed. Type III (n=18) was characterized by the presence of a single-chamber cyst with finely dispersed contents, and type IV (n=12) was characterized by the presence of a dense partially calcified wall, thick septa, and the presence of daughter living echinococci.

Currently, CT and MRI are effectively used to diagnose REP, along with ultrasound. It should be noted that CT and MRI make it possible to more clearly and deeply determine the localization of parasitic cysts in the liver in accordance with the segmental structure, the relationship of the parasitic focus to the parenchyma, the portal capsule of the liver, large vessels, the inferior vena cava and neighboring organs. In 11 cases, for the purpose of differential diagnosis of REC and a tumor process in the liver, CT was used, where the shape, internal contour of the cyst, thickness and density of its wall, contents, and signs of calcium salt ratios were assessed. CT scans of the studied patients revealed multiple daughter blisters, thickening of the cyst walls, unevenness of its contours, dissection of the parasitic membranes and heterogeneity of the contents. In the presence of REP on CT, cavitary formations of various sizes were diagnosed in 11 (13%) of the examined patients. In cases of diagnostic difficulties in differentiating residual cavities after echinococcectomy with recurrent cysts, the detection on tomograms of a clearly defined cuticular layer of hydatid “sand” in the lower segment of the cyst facilitated the differential diagnosis in favor of REP. Magnetic resonance imaging (MRI) was usually used at the final stage of non-invasive examination in 8 (9.5%) patients with REP in order to detail the nature of pathomorphological changes in the lesion and clarify the degree of involvement of large vascular-secretory structures in the process. In an MRI study, a ribbon hyperechoic structure in the lumen of the cyst (exfoliated chitinous membrane), as well as additional cystic inclusions (daughter cysts), were characteristic of REC.

Conclusions: Predictors of relapses of liver echinococcosis are: the multiple nature of echinococcosis, the presence of a dead parasite, the absence of postoperative

anti-relapse chemotherapy, medical examination, reinvasion of the parasite, as well as palliative interventions.

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