

## RESULTS OF TREATMENT OF PATIENTS WITH LIVER CAVITIES

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✓ Resume

*The aim of the study was to study the results of surgical treatment of patients with cavity formations of the liver with complex intrahepatic locations with small sizes.*

*According to a number of modern authors, such diseases as parasitic and non-parasitic cysts, residual liver cavities after surgery and liver abscess can be included in the category of cavitory liver formations. With complex intrahepatic locations of cavitory formations of the liver, especially its small size, surgical treatment has a number of technical difficulties.*

**Key words:** *cavitory formations of the liver, liver cysts, liver abscess.*

### **Relevance.**

Despite the development of new methods of surgical treatment of patients with cavity formations of the liver, the actual problem of hepatic surgery remains. According to a number of modern authors, such diseases as parasitic and non-parasitic cysts, residual liver cavities after surgery and liver abscess can be included in the category of cavitory liver formations [1,2,3,4,5,6,7,8,9,10].

The development of surgical hepatology at the turn of the century was marked by a breakthrough associated with the active introduction of the latest technologies in the diagnosis and treatment of focal liver lesions [11, 12,13,14,15,16,17,18,19,20]. Up until the 90s of the XX century, liver resection and transplantation for tumors were performed extremely rarely, and the results were disappointing [21, 22,23,24,25,26,27,28,29,30].

Along with this, there is an increase in the incidence of benign and malignant liver tumors in the world. Basically, this trend is associated with mutation of tumor suppressor genes and proto-oncogenes, viral hepatitis B and C, exposure to harmful factors (malnutrition, alcohol consumption, etc.), widespread use of oral hormonal contraceptives, corticosteroid and androgen therapy [31, 32,33,34,35,36,37,38,39,40]. Currently, there is no single coordinated tactic for

choosing the volume of surgical intervention on the liver with its focal lesions. This is evidenced by the difference of views, approaches to determining indications, methods and options for surgical interventions [41, 42,43,44].

The aim of our study was to study the results of surgical treatment of patients with liver cavity formations with complex intrahepatic locations with small sizes.

### **Material and methods**

The results of surgical treatment were analyzed in 17 patients with cavity formations, complex intrahepatic locations with small sizes up to 5 cm.

The complex method of treatment of the examined patients included general strengthening symptomatic treatment before the operation period. Surgical treatment for all patients was performed by mid-median laparotomy access.

The majority of patients (72.7%) were in the most able-bodied age (from 20 to 50 years).

Of the examined patients, 13 (76.4%), 3 (17.6%) patients were admitted with suppuration of the residual cavity after hepatic echinococcectomy, and 1 (5.8%) patients were admitted with an acute liver abscess of various etiology. (Table 1).

Table 1.

### **Distribution of patients with cavity formations of the liver according to the etiological factor.**

No	Types of diseases	Number of patients	In percentages
1.	liver cyst	11	76,4 %
2.	Residual liver cavity	3	17,5 %
3.	liver abscess	1	5,8 %
	Total	17	100 %

All patients on the day of admission were urgently measured body temperature, respiratory rate, an objective study of the liver (palpation, percussion), ultrasound examination and, if necessary, MSCT or CT scan of the liver and abdominal cavities, conservative general strengthening and symptomatic therapy was started. In patients with residual cavities and liver abscess, empiric antibiotic therapy was carried out, followed in the postoperative period, taking into account the sensitivity of the microflora. After an appropriate examination and preoperative preparation,

traditional surgical interventions were performed in elective or urgent delayed orders.

Diagnosis of the disease began with the collection of patient complaints, their severity, anamnesis of the duration of the disease, analysis of the results of clinical and objective examination of the patient. During the collection of anamnesis, attention was paid to determining the etiological factors in the development of the disease, the nature and duration of complaints, concomitant and background pathology. General clinical and physical examination methods were aimed at identifying the exact diagnosis of the cavity of the liver formation, size, nature and its anatomical location. All patients underwent a detailed complete blood count, biochemical blood parameters were determined, a general urinalysis was performed, blood was taken for ELISA or EMF for syphilis, markers of viral hepatitis B and C, antibodies to HIV were determined, an ECG was performed. To establish the diagnosis of echinococcal liver brush, a serological test was performed, the reaction of precipitation and a blood test for eosinophils. When concomitant pathology was detected, the patients were consulted by the relevant specialists, profile examinations were performed.

Microbiological analysis was carried out by sampling secretions from the contents of the liver cavities during the operation and in the postoperative period from the drainage tube with a qualitative and quantitative assessment of the isolated infection, as well as its susceptibility to various antibiotics.

### **Results and discussions**

During the operation, when detecting and getting into the cavity of the echinococcal brush in 17 patients with intrahepatic locations with cavity formations of the liver with small sizes, there was a technical difficulty due to the deep-intrahepatic located liver cyst with small sizes (up to 5 cm).

Of the 17 patients of group II with small cavity formations with complex intrahepatic locations, 13 patients had echinococcal brushes up to 5 cm in size in the hydatotic stage. In 4 patients, a purulent focus of the liver was noted in the form of postoperative suppuration of the cavity in 3 patients, a liver abscess in 1 patient. During the operation in all these patients, both visual and palpatory revision of the liver could not determine the lesion due to its deep intrahepatic location in small sizes. For that, a control revision puncture of the liver with a syringe with thin needles was repeatedly carried out to clarify the projection of access to the liver

cavity. In 2 cases, after the control puncture and pumping out up to 2-3 ml of echinococcal fluid, there was a drop in the lumen of the hand and a decrease in the size of the hand, which made it even more difficult to detect an intrahepatic located hand. The operation required great technical difficulty and traumatization of the liver parenchyma.

All 17 patients with liver echinococcosis had hydatid liver echinococcosis with small intrahepatic locations. The main stages of surgical intervention in these patients included themselves: after removal of the chitinous membrane and treatment of the residual cavities with anthelmintic drugs, the operation was completed by leaving the drainage tube in the cavity (semi-closed method).

### **Clinical example**

As was noted above, out of 17 patients with cavity formations of the liver, small intrahepatic locations, 4 patients had purulent foci of the liver. Of these, 3 patients were with suppuration of the residual cavities after undergoing liver echinococcectomy over the past three years. In 2 patients, the purulent focus was localized in the VI segment of the liver; in 1 patient, the purulent focus was localized to the IV and V segments of the liver. According to the protocol of the transferred operation, the localization of the purulent focus corresponded to the projection of the transferred echinococcectomy. Ultrasound and MSCT of the liver revealed an intrahepatic location of a cavity formation up to 5 cm in size. One patient had an acute abscess in the VI segment of the liver, which, during ultrasound and MSCT, revealed a cavity formation in the region of the VI segment of the liver. The cavitory formation contained a cloudy, thick liquid, the walls of the cavity here, as in the analogous patients of the previous group, had a thin pyogenic capsule. Around the lesion of liver tissues, there was a dense infiltrative area from 3 to 5 cm, the intensity of which gradually decreased from the purulent focus to the periphery (Fig. No. \_\_). (ultrasound and MSCT abscess + residual cavity)

On the day of admission, a clinical and laboratory study of the blood of patients with purulent foci of the liver showed a higher level of intoxication than in patients with liver echinococcosis.

It should be noted that all these patients also underwent an operation on a wide upper median approach from the xiphoid process of the sternum to the umbilicus.

Almost all 4 patients with purulent cavitory lesions of group II also had technical difficulties in performing the operation, similarly to patients with liver

echinococcosis of this group. The technique of surgical operation, as in the previous group of patients, was drainage, emptying the cavity from purulent contents and sanitation of the liver cavity. After drainage of the purulent focus with silicone drainage, the drainage was fixed with catgut sutures on the liver capsule and fixed to the skin with silk sutures through the contouroperure.

Of the four patients with purulent foci of the liver, two patients had St. Aureus. one was found to have Proteus. All of them were sensitive to cefaperazone. In all patients with purulent cavitory foci of the liver, drainage, emptying and sanitation of the purulent focus with antiseptic solutions were carried out, and a drainage tube was left in the cavity. In the postoperative period, the liver cavity was sanitized daily through the drainage tube, followed by administration of antibiotics, taking into account the sensitivity of the microflora.

In the postoperative period, all indicators of intoxication, except for blood ESR, returned to normal by the 8-9th day. By 11-12 days of treatment, all these patients were discharged to outpatient observation with drainage tubes in the residual cavities. By 13-15 days, all drainages after the control . Ultrasound studies of the residual cavity are removed on an outpatient basis. At the same time, the size and content of the liver cavity were taken into account.

### **Conclusions:**

1. Performing a surgical operation by the traditional method, patients with abdominal cavity formations of the liver with complex anatomical, intrahepatic locations, has its own technical difficulties, which in turn affects the duration of the operation and contributes to the development of postoperative complications.

2. Surgical treatment of complex anatomical, intrahepatic locations of cavitory formations of the liver requires the search for new more effective low-traumatic surgical methods of treatment.

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