# COMPARATIVE EVALUATION OF THE RESULTS OF ECHINOCOCCECTOMY FROM THE LIVER DEPENDING ON THE CONDITION OF THE FIBROUS CAPSULE

***Babadjanov A.K.[1], Tuksanov A.I.[2]***
*State Institution "Republican Specialized Scientific and Practical Medical Center for Surgery named after academician V.Vakhidov"[1]*
*The Medical and sanitary department of the Navoi Regional Administration, the State Institution "Fund" of the Navoi Mining and Metallurgical Combine[2]*

**Abstract**
In the surgery of liver echinococcosis in the Republic of Uzbekistan, organ-preserving minimally invasive and traditional interventions continue to dominate in clinics of various levels of healthcare. All patients were divided into two groups. The main group included 192 patients with liver echinococcosis who underwent additional treatment options for the residual cavity using the proposed methods during laparotomy or laparoscopic operations after the echinococcectomy stage. Residual cavities with dense fibrous walls, which are not amenable to suturing, are of particular difficulty in the surgery of echinococcosis. The use of the proposed method of treatment of the residual cavity with a rigid fibrous capsule in both open and laparoscopic interventions reduces the risk of early complications from 19.1% to 4.5%.
**Keywords:** echinococcosis of the liver; the condition of the fibrous capsule; Hemoben; FarGALS antiseptic solution; pericystectomy.
In the surgery of liver echinococcosis in the Republic of Uzbekistan, organ-preserving minimally invasive and traditional interventions continue to dominate in clinics of various levels of healthcare. Against this background, one of the urgent issues remains the option of treating the residual cavity after echinococcectomy, implying both antiparasitic efficacy and the possibility of accelerating the processes of obliteration of the fibrous capsule.
The study is devoted to the development of optimal methods for additional treatment of the residual cavity, taking into account the elastic or rigid walls of the fibrous capsule to reduce the risk of developing specific complications from the residual cavity and accelerate the processes of its obliteration. All patients were divided into two groups. The main group (2020-2023) included 192 patients with liver echinococcosis who underwent additional treatment options for the residual cavity using the proposed methods during laparotomy or laparoscopic operations

after the echinococcectomy stage. The comparison group (2016-2019) included 211 patients who underwent similar interventions using the traditional method.

According to the type of fibrous capsule, both groups were divided into 2 more subgroups: elastic or rigid fibrous capsule. Accordingly, in the comparison group there were 102 patients with an elastic residual cavity and 94 patients with a rigid residual cavity, in the main group there were 101 and 88 patients, respectively.

With an elastic fibrous capsule in the comparison group, traditional echinococcectomy was performed in 81 (69.2%) cases, in the main group in 62 (59.6%) patients, laparoscopic echinococcectomy in 34 (29.1%) and 40 (38.5%) patients, respectively, liver resections (marginal or anatomical) were performed in 2 (1.7%) and 2 (2.0%) patients.

With a rigid fibrous capsule in the comparison group, traditional echinococcectomy was performed in 82 (87.2%) cases, in the main group in 60 (68.2%) patients, laparoscopic echinococcectomy in 8 (8.5%) and 21 (23.9%) patients, respectively, liver resections (marginal or anatomical) were performed in 4 (4.2%) and 7 (7.9%) patients. The method of treating a fibrous capsule in uncomplicated forms of liver echinococcosis lesion includes the following technical aspects: the use of a domestic bioabsorbable hemostatic agent HEMOBEN, the use of a Matrix laser therapy device, as well as a Redon type drainage kit and postoperative laser irradiation Pulse-100 percutaneously.

Residual cavities with dense fibrous walls, which are not amenable to suturing, are of particular difficulty in the surgery of echinococcosis. In this aspect, we propose an improved method of processing the fibrous capsule, which includes the following distinctive steps: laser exposure to the wall of the fibrous capsule with a high-energy Lakhta-Milon laser; additional antiparasitic chemical treatment with FarGALS antiseptic solution; application of HEMOBEN composition.

In patients with echinococcosis of the liver, the presence of an elastic fibrous capsule allows for open operations in 74.5-78.7% (for both groups) to perform complete suturing of the residual cavity (54.3-69.3%) or drainage (9.3-20.2%), in 12-12.8% of patients it is possible to perform abdominization of the residual cavity and only in 9.3-In 12.8% of cases, due to the difficult localization of the cyst (more often deeply intraparenchymatous), the operation is limited to drainage of the residual cavity with a minimum volume of pericystectomy. In turn, with the availability of echinococcal cysts for laparoscopic intervention, the probability of performing wide abdominization was 42.1-68.9%, and in other cases only partial pericystectomy with drainage is performed. At the same time, the use of the proposed method of treatment of the residual cavity with an elastic fibrous capsule

in both open and laparoscopic interventions reduces the risk of early and late specific complications. Thus, the incidence of complications in the early postoperative period in the comparison group was 14.5%, whereas in the main group it was 2.9% ($\chi2$=9.072; df=1; p=0.003), and in the period up to 3 months after surgery, this indicator was 12.8% versus 2.9% ($\chi2$=7.265; df=1; p=0.008), which reduced the need for repeated minimally invasive interventions in these periods from 9.4% to 2.0%. The use of the proposed method of treatment of the residual cavity with a rigid fibrous capsule in both open and laparoscopic interventions reduces the risk of early complications from 19.1% (in 18 of 94 patients in the comparison group) to 4.5% (in 4 of 88 patients in the main group; $\chi2$=9,121; df=1; p=0.003), and in the period up to 3 months after surgery, this indicator was 16.0% (15) versus 3.4% (3; $\chi2$=8,030; df=1; p=0.005), which reduced the need for repeated minimally invasive interventions in these periods from 6.4% to 3.4%, while Another 3.2% (3) of patients in the comparison group were re-operated in an open manner, and 6.4% of complications were resolved conservatively ($\chi2$=14.609; df=4; p=0.006).

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