

AN IMPROVED METHOD FOR TREATING THE RESIDUAL CAVITY DURING ECHINOCOCECTOMY FROM THE LIVER WITH AN ELASTIC FIBROUS CAPSULE

Babadjanov A.K.¹, Makhmudov U.M.¹, Tuksanov A.I.², Ibrokhimov S.S.¹

*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 Combine²*

Abstract

One of the urgent issues in the surgery of echinococcosis of the liver remains the option of treatment of the residual cavity, implying both antiparasitic efficacy and the possibility of accelerating the processes of obliteration of the fibrous capsule. To assess the effectiveness of the proposed method, 2 groups were formed. There were 104 patients in the main group and 117 in the comparison group. 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 9.3-12.8% 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.

Keywords: echinococcosis of the liver; residual cavity; an elastic fibrous capsule; laparoscopic echinococcectomy; Hemoben

One of the urgent issues in the surgery of echinococcosis of the liver remains the option of treatment of the residual cavity, implying both antiparasitic efficacy and the possibility of accelerating the processes of obliteration of the fibrous capsule. A method for treating the residual cavity in uncomplicated forms of liver echinococcosis in the presence of an elastic fibrous capsule that collapses after extraction of the parasite is proposed, including laser radiation, which provides the possibility of treating cavities of any configuration, inhibition of the growth of pathogenic flora, as well as in combination with the use of a powdered composition "HEMOBEN". The technique promotes local hemo and lymphostasis, sealing of the bile duct microspheres and strengthening of the processes of obliteration of the walls

of the fibrous capsule both during suturing and vacuum drainage. The method can be used as an alternative to pericystectomy and liver resection.

To assess the effectiveness of the proposed method, 2 groups were formed. There were 104 patients in the main group and 117 in the comparison group. The majority of patients were with CE1 and CE2 stages of parasite development according to ultrasound data with sizes - medium (5-10 cm) and large (>10 cm). In total, 135 cysts were removed in the comparison group, 123 cysts in the main group.

In the comparison group, traditional echinococectomy was performed in 81 (69.2%) cases, in the main group in 62 (59.6%) patients, laparoscopic echinococectomy in 34 (29.1%) and 40 (38.5%) patients, respectively, to assess the proportion of potential resection interventions, liver resections (marginal or anatomical) were included in the study groups, which were produced in 2 (1.7%) and 2 (2.0%) patients.

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 9.3-12.8% 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% ($\chi^2=9.072$; $df=1$; $p=0.003$), and in the period up to 3 months after surgery, this indicator was 12.8% versus 2.9% ($\chi^2=7.265$; $df=1$; $p=0.008$), which reduced the need for repeated minimally invasive interventions in these periods from 9.4% to 2.0%.

References

1. Babadjanov A.K., Yakubov F.R., Ruzmatov P.Y., Sapaev D.S. Epidemiological aspects of echinococcosis of the liver and other organs in the Republic of Uzbekistan. *Parasite Epidemiol Control*. 2021 Nov 24;15:e00230. doi: 10.1016/j.parepi.2021.e00230. PMID: 35005264; PMCID: PMC8716672.

2. Sapaev DS, Yakubov FR, Yakhshiboev SS. Evaluation of the factors influencing the choice of laparoscopic echinococcectomy in liver echinococcosis (LE) and its impact on postoperative outcomes. *Exp Parasitol.* 2023 May 1;248:108495. doi:10.1016/j.exppara.2023.108495
3. Sapaev D.S., Yakubov F.R., and Yakhshiboev S.S. 2023. Comparative results of surgical treatment of primary echinococcosis of the liver. *European Journal of Medical Genetics and Clinical Biology* 1 (2):36-45. <https://e-science.net/index.php/JMGCB/article/view/223>.
4. M.M. Akbarov, R.Yu. Ruzibaev, D.Sh. Sapaev, P. Yu. Ruzmatov, F.R. Yakubov. (2020). Modern Trends in the Prevention of Liver Echinococcosis. *Indian Journal of Forensic Medicine & Toxicology*, 14(4), 7433–7437. DOI: <https://doi.org/10.37506/ijfmt.v14i4.12823>
5. Рузибаев Р.Ю., Курьязов Б.Н., Сапаев Д.Ш., Якубов Ф.Р., Рuzmatov П.Ю., & Бабаджанов А.Р. (2019). Современная оценка проблем диагностики и хирургического лечения эхинококкоза. *Вестник Национального медико-хирургического Центра им. Н. И. Пирогова*, 14 (1), 134-139. <https://doi.org/10.25881/BPNMSC.2019.66.50.024>
6. Сапаев Д.Ш., Рузибаев Р.Ю., Курьязов Б.Н. Пятилетний опыт современных операций в лечении эхинококкоза печени // Профилактическая и клиническая медицина. –2017. –№4 (65). –С. 74–78.