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ASPECTS OF MODERN DIAGNOSIS AND TREATMENT OF LIVER ABSCESS

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Abstract. Liver abscess is defined as a pus-filled formation in the liver that can develop as a result of liver damage or intraabdominal infection disseminated from the portal circulation. **Purpose of the study:** improvement of modern methods in the diagnosis and treatment of liver abscess. **Material and methods.** In the Khorezm regional Multidisciplinary Medical Center, 75 patients treated with "liver abscess" diagnosis were retrospectively and prospectively analyzed in the period from 2015 to 2021. The patients were divided into two groups. **Results.** The negative effect on the patient's body was not detected when using the FarGA1LS solution. According to the results of a bacteriological examination, no bacterial growth was observed in both groups in liquids that came out of the residual cavity. **Conclusion:** With an abscess of adipose tissue caused by the action of antiseptics of FarGALS and chlohexidine solutions, the bacteriological effect is not observed, therefore, this antiseptic does not have a bactericidal effect on adipose tissue.

Key words: liver abscess; echinococcal infection; residual cavity; ultrasound; comparative results; drainage of the residual cavity.

Introduction. Liver abscess is defined as a pus-filled formation in the liver that can develop as a result of liver damage or intraabdominal infection disseminated from the portal circulation [1].

Liver abscesses can be classified in different ways: firstly, by their location in the liver. 50% of solitary liver abscesses occur in the right lobe of the liver (a more significant part with a large blood supply), less often in the left lobe of the liver or the caudate lobe. Another method is to consider the source: if the cause is infectious, most liver abscesses can be divided into bacterial (including amoebic) and parasitic sources (including cystic drift) [2].

The annual incidence is about 2.3 cases per 100,000 population. Men get sick more often than women [3]. Age plays an important role in the type of developing abscess. People aged 40-60 years are more susceptible to the development of a liver abscess that is not a consequence of injury.

With echinococcal infection, the child has an initial asymptomatic phase. Years later, some of these patients will have clinical symptoms of reactivation of the infection [4-7] Clinical manifestations depend on the type, size and localization of existing cysts. Small cysts in non-viable organs may go unnoticed, but large cysts in critical areas may show signs of compression or rupture [8-10]. The usual rate of cyst growth is from 1 to 5 centimeters per year. The liver is

affected in two-thirds of cases of echinococcal infection. Symptoms of compression usually begin at a diameter of 10 cm and include biliary colic, cholangitis, mechanical jaundice, portal and venous obstruction, Budd-Chiari syndrome, bronchial fistula. If it ruptures, there will be obvious peritonitis or anaphylaxis.

After collecting anamnesis and physical examination, the next step is to obtain laboratory and diagnostic data to determine the cause of the patient's main complaint and confirm or exclude liver abscess. Laboratory tests include a general blood test with a differential diagnosis, tests for hepatocellular damage (liver enzymes, which are usually elevated in half of cases), tests of synthetic liver function (prealbumin and international normalized ratio), alkaline phosphatase (elevated in about 90% of patients), C-reactive protein, erythrocyte sedimentation rate and blood culture to exclude bacteremia [11].

However, the initial test of choice is an abdominal ultrasound (ultrasound), which shows hyper- or hypoechoic lesions with rare splinters or septa. Computed tomography with contrast is the next step and a little more sensitive. The strengthening of the rim and swelling are atypical, but very specific for infection. After ultrasound or computed tomography, needle aspiration is performed under control to determine the exact pathogen, which is important for both diagnostic and therapeutic purposes (small cysts) [12]. Technetium scanning is another test with a sensitivity of 80% (less than that of computed tomography), which is 50-80% for gallium and 90% for indium [13, 14]. If the inner walls of the cyst are folded (separation of the echinococcal membrane from the cyst wall) during ultrasound, echinococcal disease is more likely.

Drainage of the abscess and antibiotic treatment are the cornerstones of treatment.

Drainage is needed and can be done under the ultrasound or computed tomography. Needle aspiration (at times repeatedly) might be all that is required for abscesses less than 5 cm, but a catheter placement might be warranted if the diameter is more significant than that [15, 16]. Percutaneous drainage with catheter placement is probably the most successful procedure for larger than 5 cm abscesses [17]. Laparoscopic drainage is also used at times. Surgery should be done for peritonitis, thick wall abscesses, ruptured abscess, multiple large abscesses, and previously failed drainage procedures. An operation is performed either by a transperitoneal approach or by the posterior transpleural approach. The former approach drains the abscess and allows for the exploration of undetected ulcers, while the latter is better for posterior abscesses. Size, location, and stage help determine a successful treatment plan. When previous biliary procedures have been done, endoscopic retrograde cholangiopancreatography (ERCP) drainage might be used [18]. Undrained liver abscesses may cause sepsis, peritonitis, and empyema [2].

In a study by Abbas, the mean duration of hospital stay for those with pyogenic liver abscesses was 13.6 days. Antibiotic therapy used for them was approximately 34.7 days. One patient expired. On the other hand, patients with amebic liver abscesses had a mean hospital stay of approximately 7.7 days, with a mean duration of treatment of 11.8 days, where all patients were cured [19].

Thus, the development of Medicine led to the introduction of new methods in the diagnosis and treatment of abdominal abscess, but the lack of an algorithm for their use did not allow full-fledged usefulness of these methods. The studies carried out assume that new research should be carried out in this regard.

Purpose of the study: improvement of modern methods in the diagnosis and treatment of liver abscess.

Material and methods. In the Khorezm regional Multidisciplinary Medical Center, 75 patients treated with "liver abscess" diagnosis were retrospectively and prospectively analyzed in the period from 2015 to 2021. The patients were divided into two groups.

There were 43 patients in the 1st main group who were showered with a miniinvasive thinning of the abscess cavity and rinsed the cavity with a solution of FarGALS. They were given systemic antibacterial therapy;

In comparison group 2, 32 patients were involved with the diagnosis of "liver abscess". In these patients, the cavity was rinsed with an aqueous solution of chlorhexidine, in addition to conventional antibacterial therapy, after the abscess cavity was Tubular in a miniinvasive way.

The age of patients is from 18 to 80 years. Females 27 (36%), males– 48 (64%) (1:2 in proportion). The median age in the main group was 50.4±15.4, compared to 51.55±15.03 in the comparison group.

In the majority of patients, one abscess was detected in the liver - 69 (92%). A large number of absesses made up 6 (8%). Primarily absesses were found in 65 (86.6%) patients to be located in the right segment of the liver and 10 (13.4%) in the patient in the left segment. Of the 6 patients with multiple absess, 3 (50%) were involved in the right segment, 2 (33.3%) were involved in the left segment, and 1 (16.6%) were involved in the process.

The volume of the liver abscess was from 16 cm^3 to 500 cm^3 or more. The base group was 166.34±54.28 cm^3, and the comparison group was 179.13±73.69 cm^3.

Percutaneous cavity tubing was done using additional tools: puncture and biopsy needles Chiba, Turner and Lunderquist used a Teflon catheter, a Huisman-type catheter needle 15 to 35 cm long, a syringe-aspirator, a metal conductor, dilators and introdusers.

After the ultrasound, the abscess cavity was punctured under the control of the same device. The puncture treatment ended with the tubing of the abscess cavity. After the discharge, the abscess cavity was washed with antiseptic agents, depending on which group the patient belongs to.

In the comparison group, the abscess cavity was washed with an aqueous solution of chlorhexidine. Patients in the main group were rinsed with FarGALS solution.

In the main group, maxillary therapy was carried out in the following order: thoroughly washed with a 0.9% solution of sodium chlorine in order to extract dark-mass pus fluid and detritus in the cavity;. Diluting the solution of FarGALS in distilled water in a ratio of 1:3, it was sent through a tube to the infused cavity, and the solution was filled up to 1\5 charge of the abscess cavity. After administering the drug, the tube was kept in a berk holat for 30 minutes. As a result of this, destructive changes occur in the cytoplasmic membrane of the microorganism due to the antibacterial, reparative and regenerative properties of FarGALS. By analogy, the comparison guru was treated with an aqueous solution of chlorhexidine.

Results and discussion. Before starting treatment measures, microflora monitoring was carried out by sowing liquid from the cavity of the tubular liver abscess into a special environment on the 3rd, 7th, 10th days after the start of treatment and after the end of treatment procedures. The volume of the abscess cavity was monitored in dynamics using ultrasound.

The negative effect on the patient's body was not detected when using the FarGALS solution. According to the results of a bacteriological examination, no bacterial growth was observed in both groups in liquids that came out of the residual cavity.

Due to the use of FarGALS solution, the cleansing of the abscess cavity was very rapid, and there was a reduction in the size of the cavity, the recovery of liver function and the duration of stationary treatment was significantly accelerated.

All patients underwent surgery within 24 hours of being diagnosed with liver abscess. In the post-surgical period, in the main group, the pathological hearth was rinsed with a solution of FarGALS through a tube inserted into the cavity, and in the comparison group, an aqueous solution of chlorhexidine was applied.

Biochemical indicators indicating liver activity fell to the norm on the 7th day in the main group. In the comparison group, these indicators began to decline only in 11 days.

The dimensions of the liver abscess are reduced from 7.64±2.52 cm to 3.43±0.97 cm in the main group of patients. In the comparison group, this figure was found to have shrunk from 7.84±2.22 cm to 6.01±1.12 cm. These indicators were reliably reduced by 15 days only after surgery.

When analyzing bacteriological results, the purification of the pathological foci in the liver gave a positive result in the main group from 74.7% to 14.6%. In dynamics, between 78.6% and 31.5% were observed in the comparison group. This indicator was clearly manifested in 12 days from surgery.

The duration of the position day of patients in the stationary was 18±0.9 days in the main group and 24.1±1.2 days in the comparison group.

The purulent complication of the injury in the post-surgical period occurred in one case in the main group, occurring in 5 cases in the comparison group.

In the comparison group, the reason for the extension of the term of the day of the seat in the stationary was mainly the fact that the operation did not end the injury for a long time.

Conclusion: 1. With an abscess of adipose tissue caused by the action of antiseptics of FarGALS and chlohexidine solutions, the bacteriological effect is not observed, therefore, this antiseptic does not have a bactericidal effect on adipose tissue.

2. Furnace treatment with FarGALS solution accelerated the recovery of liver activity, reducing it from 11 days in the comparison group to 7 days (main group).

3. In dynamics, the size of the abscess size was found to have shrunk from 7.64±2.52 cm in the main group to 3.43±0.97 cm, and from 7.84±2.22 cm to 6.01±1.12 cm in the comparison group.

4. The duration of treatment in the stationary decreased from 24 to 18 days in the main group, compared to the comparison group. The use of FarGALS solution can prevent recurrence of abscess by increasing the effectiveness of the treatment process.

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