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FEATURES OF THE CLINICAL COURSE OF ABSCESSES LIVER ON THE BACKGROUND OF DIABETES

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ABSTRACT

The clinical course of patients with liver abscess (AP) on the background of diabetes mellitus (DM), the results of surgical treatment and their complications were evaluated. In 31 (36%) of the 86 patients receiving treatment at clinical base of Buchgasse, was diagnosed with diabetes. As a result of the study, patients with DM disease have features of the clinical course of AP that lead to severe complications. AP puncture on the skin side reduces diagnostic errors, allows open surgical treatment of abscesses with a size greater than 120 mm, and leads to better treatment results. These patients should be treated together with an endocrinologist.

KEYWORDS: Liver abscess, diabetes mellitus, clinical course, treatment, surgery.

INTRODUCTION

Liver abscess is one of the most common diseases and is one of the leading causes of death from purulent surgical pathologies 11-31% (3; 11; 14). Many authors claim: Liver abscess often develops against the background of diabetes mellitus (2; 9; 10;), from this position it is advisable to distinguish patients with liver abscess, taking into account the concomitant pathology of diabetes mellitus. The main reasons that contribute to the development of liver abscess in patients with diabetes.

- Hyperglycemia, which leads to a severe course of the disease than in patients with normal blood sugar;
- Reduced immunity and general weakening of the body.
- Hematogenous route of infection through the vessels of the portal vein from inflammatory foci of the abdominal cavity.
- Cholangiogenic route of transferring infection.

- An abscess of the liver developing on already existing formations (ech.hepatic liver, tumors, non-parasitic cysts, etc.).

The most common etiological factors are gram-negative bacteria, anaerobic microorganisms, staphylococci, clostridial infections, etc.

Infection of the liver is often carried out hematogenously, pathogenic microorganisms come from inflammatory foci of the abdominal cavity.

With purulent cholangitis, the infection spreads via the cholangiogenic pathway (7; 12;.). A separate group consists of abscesses developing in previously existing pathological lesions of the liver (echinococcal cyst, tumors, hematomas).

Liver abscesses associated with diabetes mellitus often have an asymptomatic course and the cause is unclear (8; 10; 13; 15;). They can be single and multiple. Among the causes leading to the development of liver abscesses, appendicitis and peritonitis can be noted in 20-30% of cases; cholangitis and malignant neoplasms of the liver and biliary tract - 37-55%; pylephlebitis - 11-25%. In 18-27% of cases, the abscess is cryptogenic. This data fluctuate in different regions. Sources of infection in patients with liver abscess in diabetes mellitus are multiple, and the sown flora is mixed. Over the past two decades, cases of liver abscesses have become more frequent in patients with biliary acute pancreatitis (1; 4; 6). To determine the location, size of the abscess, the thickness of the capsule, and sometimes the functional state of the liver tissue around the lesion, the most informative is ultrasound, in addition, the use of ultrasound diagnostics allows in almost all cases to conduct differential diagnostics between the liver abscess and the suppuration cyst, both parasitic and non-parasitic etiology (5; 10; 14;). Despite many publications, a single tactic for managing patients with liver abscess with diabetes mellitus, the percentage of liver abscesses and the clinical features of patients with concomitant endocrine diseases have not yet been developed. Failures in the treatment of liver abscesses in the presence of diabetes mellitus are due to the underestimation of hyperglycemic and interhormonal relationships in autoimmune damage to the body. These reasons served as an impetus for the development of methods for the active detection of hemodynamic disturbances in combined pathology and determine the degree of liver damage. The solution to these problems will help to develop questions of tactics, the need for and the volume of surgical intervention on the liver with a concomitant pathology of diabetes.

Purpose of the study: Improving the results of treatment of patients with liver abscess on the background of diabetes mellitus by studying clinical data with correction of hyperglycemic indices.

MATERIALS AND METHODS

For the period from 2009 to 2019, 86 patients with liver abscess were under our supervision at the clinical base of BSMI, of which 31 (36%) patients were associated with diabetes mellitus.

There were 20 men (64.5%), women 11 (35.5%), as a rule, the most active, able-bodied part of the population from 40 to 50 years old suffered from this pathology, the average age was 47.8- + 2.7 years. All patients are conditionally divided into 2 groups: I - control and II - main. The first group consisted of 55 patients with liver abscess who did not have diabetes. The second group of 31 patients with liver abscess on the background of diabetes. All patients were distributed by gender and age according to the classification of age groups adopted at the regional seminar of the World Health Organization. (Kiev, 1962).

Table № 1.

As can be seen from table 1, in the first group there were 35 (63.6%) men and 20 (36.4%) women aged 19 to 80 years (mean age was 48.4 ± 2.1 years).

In group II - 22 (71%) and 9 (29%) aged 19 to 75 years (average age was 49.4 ± 1.8 years).

Patient characteristics by gender and age

Groups	Age										total
	Under 19 years old		20-44 years old		45-59 years old		60-75 years old		75 years and more		
	male	female	male	female	male	female	male	female	male	female	
I	3	1	11	8	14	7	5	3	2	1	55
II	1		7	5	9	3	4	1	1		31
Total	5 (5,8%)		31 (36%)		33 (38,4%)		13 (15,1%)		4 (4,7%)		86

29 (33.7%) women aged 19 to 75 years. Most patients (74.4%) were at the most difficult age. (from 20 to 59 years old).

A diabetic history revealed that out of 31 patients, diabetes was detected in 22 (71%) patients for the first time, 9 (29%) patients had 4 or more years, the average duration of the disease was 11 years. Localization of liver abscesses in the presence of diabetes was the next 17

(54.8%) in the right lobe of the liver, 14 (45.1%) in the left lobe of the liver. In 6 (19.4%) patients, abscesses were located in the 7-8th segment, in 11 (35.5%) in the 4th segment of them in 3 (9.7%) patients with a breakthrough into the common bile duct. In the 5-6th segment, there were 9 (29%) abscesses of them in 3 (9.7%) with a breakthrough into the pleural cavity, and in 5 (16.1%) patients abscesses were located in 3 segments of them in two with a breakthrough into the pleural cavity. All patients complained of hyperthermia from 38 to 41 degrees, chills, general weakness. Many were worried about pain in the right hypochondrium. All patients underwent a comprehensive examination: clinical blood and urine tests, biochemical blood analysis, coagulogram, blood type and Rh factor, panoramic x-ray of the chest and abdomen, ultrasound, tomography, if necessary, FGDS, for patients older than 50 years - an ECG and a consultation with a therapist, for women - a consultation with a gynecologist.

Ultrasound was performed several times for the purpose of dynamic observation to and after surgery.

RESULTS AND DISCUSSIONS

The clinical picture of liver abscess is represented by the classical triad: fever, jaundice, moderate hepatomegaly. Complaints: an increase in body temperature was observed in 78% of patients, chills (9.1%); fever (81.4%); weakness and malaise (21.1%); - weakness and malaise (21.1%); abdominal pain (80%); - nausea and vomiting (25.7%); weight loss (27.7%); pain in the right shoulder (24.2%); sweating (28%); diarrhea (1.5%); dyspnea or shortness of breath (1%); cough (0.8%).

Symptoms identified during the examination: pain in the upper right corner of the abdomen (54%); hepatomegaly (47%); jaundice (25.3%); pleural effusion (14.3%); wheezing in the lower parts of the lungs (6.3%); raising the dome of the diaphragm on the right (6.3%). Often, liver abscesses in the presence of diabetes mellitus were asymptomatic.

Because of this, about 20% of patients were diagnosed a month or more after the occurrence. The indicators of the clinical blood test did not always correspond to morphological changes: in 18 patients (43%), leukocytosis was lower than 9.0 × 10 g / l, and in 14 patients (32%) the percentage of stab forms did not exceed 10, which in most cases was observed in elderly patients and, possibly, this is due to the body's reactivity during this period of life and due to the presence of diabetes mellitus. The maximum values of these indicators in the remaining

patients reached: leukocytosis - 26.4 × 10g / l, metamyelocytes - 2%, stab - 32%, toxic granularity ++. Of the biochemical parameters, creatinine, urea, ALT and AST increased most often in 27 patients (49%). Indicators of total bilirubin increased in 13 patients (23.6%) to 60.8 μmol / L.

The volume of surgical interventions in both groups of patients consisted of laparotomy in 47 (54.7%) patients with subsequent echinococcectomy using one of the known methods, taking into account the anatomical location, size and stage of parasitic cysts.

It should be noted that the abscesses located on the 7-8th segment were operated on with torocial intercostal access in 23 (26.7%) patients.

In addition, in 16 (18.6%) patients with the marginal location of liver abscesses, the puncture method of rehabilitation and drainage under the control of an ultrasound apparatus was used. Having studied the distribution of sepsis among various etiological groups of liver abscesses, it turned out that the most common severe forms of sepsis were found in patients with diabetes mellitus. Analysis of the distribution of liver abscesses in size (10 -120 mm) in patients in the group with effective punctures showed that percutaneous punctures are most effective when the size of the abscesses is less than 80 mm: the effectiveness was 79.2%; with abscess sizes over 80 mm, the effectiveness was 33.3% A comparative analysis indicates that, with liver abscesses of 120-160 mm in size, the site of destruction of the parenchyma is large, which indicates the presence of large sequestration in the abscess cavity or complete destruction of the liver lobe. In this case, the use of 2 or 3 drainage tubes or large diameter drainages does not give satisfactory results. For this group of patients, the open surgical treatment of liver abscesses turned out to be the prerogative, which implies the removal of pus, necrotic tissue, adequate drainage of the abscess cavity or resection of the liver lobe with its complete destruction. Based on these considerations, in our study we often resorted to open surgery, which guaranteed the success of treatment in this category of patients. Of the 42 patients we operated on in an open way, all were discharged with a satisfactory result.

CONCLUSIONS

1. Violation of the patency of the bile ducts in combination with infection with concomitant pathology of diabetes mellitus is often the main cause of cholangiogenic liver abscesses in which there is a polymicrobial flora.

2. The presence of diabetes in this category of patients complicates the clinical course of the disease, leading to the development of complications.
3. Independent risk factors for mortality in liver abscesses with concomitant diabetes mellitus are. persistent hyper or hypoglycemia, severe ketoacidosis, intoxication, miliary abscesses of the liver, septic shock, inadequate drainage of the bile ducts, perforation of the liver abscess and high serum urea.
4. In order to maintain a good result after surgical operations in patients with hepatic abscess concomitant diabetes mellitus, it is necessary to resolve a number of real organizational and diagnostic problems.

This requires: Regular monitoring of glycemic tests and biochemical factors in these patients and timely correction.

Collaboration with an endocrinologist is required.

REFERENCES

1. Akhaladze G. G. Key issues of the surgical treatment of liver abscesses // Annals of surgical hepatology, 2012; 17(1): 53–60.
2. Bogun L.V. Infections in patients with diabetes mellitus. Journal. "Diseases and antibiotics", 2009s.
3. Efimov D.S. Experience in the treatment of liver abscesses in an emergency hospital. Kharkov Surgical School, 2015; 6(75): S. 172-176.
4. Kipshidze A. A. Biostatistical analysis of the results of the treatment of bacterial liver abscesses using minimally invasive methods and open surgical interventions / A. A. Kipshidze, P.S. Beiner, N.V. Beiner // Medical Perspectives, 2013; 4: 74-78.
5. *M.P. Korolev, Yu. A. Spesivtsev, L.E. Fedotov, R.G. Avanesyan Minimally invasive treatment of liver abscesses Herald. SPbSU, Sep. 11. 2012; pub4: 121-131.*
6. Maloshtan A. A. Abscess of the liver, questions of history / A.A. Maloshtan // Ukrainian Journal of Surgery, 2011; 4(13): 255–259.
7. Modern tactics in the treatment of bacterial abscesses of the liver / V. A. Ovchinnikov, A. A. Malov, S.V. Akulenko, [et al.] // Medical Almanac, 2013; 5(28): 99-102.
8. Tolstikov A.P. Choice of a method of surgical treatment of patients with bacterial medical abscesses of the liver, 2012; 2: 265–269.
9. Tsereteli I.Yu, Akhaladze G.G, Halperin E.I. Analysis of risk factors for mortality in liver abscesses//Annals of surgical heptology, 2004; T.9(1): 69-78.

10. Tsereli I.Yu, liver abscesses: causes, diagnostic errors and treatment, the dissertation for the degree of candidate of medical sciences. Moscow, 2005.
11. *Siu-Man Ng. S., Lee J. F.-Y., Lai P. B.-S.* Role and outcome of conventional surgery in the treatment of pyogenic liver abscess in the modern era of minimally invasive therapy // World Journal of Gastroenterology, 2008; 14(5): 747–751.
12. *Zibari G. B., Maguire S., Aultman D. F.* et al. Pyogenic liver abscess // Surg Infect (Larchmt), 2000; 1(1): 15–21.
13. *Zerem E., Hadzic A.* Sonographically guided percutaneous catheter drainage versus needle aspiration in the management of pyogenic liver abscess // AJR, 2007; 189: 138–142.
14. Johannsen E. C. Pyogenic liver abscesses / E. C. Johannsen, C. S. Sifri, C. M. Lawrence // Infect. Disease Clinics of North America, 2000; 14: 47–56.