SCHOLASTIC:
Journal of Natural and Medical Education
Volume 2 Issue 4, Year 2023 ISSN: 2835-303X
https://univerpubl.com/index.php/scholastic

Features of the Clinical Course of Abscesses Liver on the Background of Diabetes

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Article Information

Received: February 27, 2023
Accepted: March 28, 2023
Published: April 29, 2023

Keywords: *liver abscess, diabetes mellitus, clinical course, treatment, surgery.*

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 the 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.

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 state: Liver abscess often develops against the background of diabetes mellitus (2;9;10;) , from this position it is advisable to single out 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 more severe course of the disease than in patients with normal blood sugar levels;
- ✓ 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 infection.
- ✓ Liver abscess developing on already existing formations (e.g. 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 more often carried out by the hematogenous route, pathogenic microorganisms come from inflammatory foci of the abdominal cavity. With purulent

cholangitis, the infection spreads by the cholangiogenic route (7; 12;.), A separate group consists of abscesses that develop in pre-existing pathological liver formations (echinococcal cyst, tumors, hematomas).

Liver abscesses on the background of diabetes mellitus are often asymptomatic and the cause is unclear (8;10;13;15;). They can be single or 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. These 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 increased 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 focus, the most informative is ultrasound, in addition, the use of ultrasound diagnostics allows in almost all cases to carry out differential diagnosis between a liver abscess and a festering cyst , both parasitic and non-parasitic etiology (5;10;14;).

, a unified management strategy for patients with liver abscess against the background of diabetes mellitus, the percentage of occurrence of liver abscesses and the characteristics of the clinical course in patients with concomitant endocrine diseases have not yet been developed .

Failures in the treatment of liver abscesses against the background 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 a method for actively detecting hemodynamic disorders in comorbidities and determining the degree of liver damage. The solution of these problems will allow developing questions of tactics, necessity and volume of surgical intervention on the liver with concomitant pathology of diabetes mellitus. Purpose of the study:

Improving the results of treatment of patients with liver abscess against the background of diabetes mellitus by studying clinical data with correction of hyperglycemic parameters.

Materials and methods.

For the period from 2012 to 2023, 86 patients with liver abscess were under our supervision at the clinical base of the State Medical Institute , of which 31 (36%) patients had concomitant 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 suffers from this pathology, the average age was 47.8-+ 2.7 years. All patients were conventionally divided into 2 groups: I - control and II - main. The first group consisted of 55 patients with liver abscess who did not have diabetes mellitus. The second group of 31 patients with liver abscess on the background of diabetes mellitus. All patients were divided by sex and age according to the classification of age groups adopted at the regional seminar of the World Health Organization. (Kyiv, 1962)

Table number 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 (mean age was 49.4 ±1.8 years),

Characteristics of patients by sex and age

Groups	Age										Total
	under 19		20-44 years old		45-59 years old		60-75 years old		75 years and over		
	Husband	female	Husband	wives	Husband	Female	Husband	wives	Husband	female	
I	3	1	eleven	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 of the patients (74.4%) were in the most difficult age. (from 20 to 59 years).

The diabetic history revealed that out of 31 patients diabetes mellitus was diagnosed for the first time in 22 (71%) patients, 9 (29%) patients had 4 or more years, the average duration of the disease was 11 years.

Localization of liver abscesses against the background of DM was as follows: 17 (54.8%) on the right lobe of the liver, 14 (45.1%) on the left lobe of the liver. In 6 (19.4%) patients, abscesses were located on the 7-8th segment, in 11 (35.5%) on the 4th segment, of which 3 (9.7%) patients had a breakthrough into the common bile duct. There were 9 (29%) abscesses on segment 5-6, of which 3 (9.7%) had a breakthrough into the pleural cavity, and in 5 (16.1%) patients abscesses were located on segment 3, of which two with rupture 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 generalized examination complex: clinical blood and urine tests, biochemical blood tests, coagulogram , blood type and Rh factor, plain roentgenoscopy of the chest and abdomen, ultrasound, tomography, if necessary, FGDS, for patients older than 50 years - ECG and consultation of a therapist, for women - consultation of a gynecologist.

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

Results and discussions

The clinical picture of a liver abscess is represented by the classic triad: fever, jaundice, moderate hepatomegaly.

Complaints: fever 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%); elevation of the dome of the diaphragm on the right (6.3%). Often, liver abscesses on the background of diabetes were asymptomatic. Because of this, about 20% of patients were diagnosed a month or more after the onset. The indicators of a clinical blood test did not always correspond to morphological changes: in 18 patients (43%), leukocytosis was below 9.0 × 10 g / l, and in 14 patients (32%) and the percentage of stab forms did not exceed 10, which in most cases was noted in patients of elderly and senile age and, perhaps, this is due to the unresponsiveness of the body during this period of life and from for having diabetes. The maximum values of these parameters in other patients reached: leukocytosis — 26.4×10 g/l,

metamyelocytes — 2%, stab — 32%, toxic granularity ++.

creatinine, urea, ALT and AST most often increased in 27 patients (49%).

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, followed by echinococcectomy using one of the known methods, taking into account the anatomical location, size and stage of parasitic cysts. It should be noted that abscesses located on segments 7-8 were operated on by thoracic 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 sanitation and drainage under the control of an ultrasound device was used. After examining the distribution of sepsis by various etiological groups of liver abscesses, it turned out that the most common severe forms of sepsis occurred in patients with diabetes mellitus. An analysis of the distribution of liver abscesses by size (10-120 mm) in patients in the group with effective punctures showed that percutaneous punctures are most effective when abscesses are less than 80 mm in size: the efficiency was 79.2 % . 3% Comparative analysis indicates that in liver abscesses 120-160 mm in size, the area of destruction of the parenchyma is large, which indicates the presence of large sequesters 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 drains does not give satisfactory results. For this group of patients, the prerogative was open surgical treatment of liver abscesses, which implies the removal of pus, necrotic tissues, adequate drainage of the abscess cavity or resection of the liver lobe with its complete destruction. Based on these considerations, in our study , open surgery was often resorted to, which guaranteed the success of the treatment of this category of patients. Of the 42 openly operated patients, all of them were discharged with a satisfactory result.

CONCLUSIONS:

1. Violation of the patency of the bile ducts in combination with infection with concomitant diabetes mellitus is often the main cause of cholangiogenic liver abscesses in which a polymicrobial flora is observed.
2. The presence of diabetes mellitus in this category of patients complicates the clinical course of the disease and leads to the development of complications.
3. Independent risk factors for mortality in liver abscesses associated with diabetes mellitus are: persistent hyper or hypoglycemia , severe ketoacidosis , intoxication, miliary liver abscesses, septic shock, inadequate drainage of the bile ducts, perforation of a liver abscess, and high serum urea levels.
4. To maintain a good result after surgical operations in patients with liver abscess concomitant with diabetes mellitus, it is necessary to resolve a number of real-life organizational, treatment and diagnostic problems. This requires: Regular monitoring of glycemic tests and biochemical factors in these patients and timely correction. Collaboration with an endocrinologist is necessary.

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