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ROLE OF ENDOSCOPIC, DIAPEUTIC METHODS AND X-RAY SURGERY IN THE TREATMENT OF COMPLICATED FORMS OF CHOLELITHIASIS

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Nurmurzaev Zafar Narbai Ugli
Khamidov Obid Abdurakhmonovich
Utaeva Ugilbibi Akbaralievna
Samarkand State Medical University, Republic of Uzbekistan, Samarkand

SUMMARY

The results of treatment of 82 patients with biliary peritonitis as a complication of acute destructive cholecystitis are presented. Biliary peritonitis as a complication of acute destructive cholecystitis was observed in 7.1% of patients. Prevalence of the perforative form of peritonitis was noted, which was observed in 67.1%, bile peritonitis due to perforation of the gallbladder wall was observed in 32.9% of patients. The priority use of minimally invasive surgical interventions (diapeutic , endoscopic and laparoscopic methods) in the treatment of local bile peritonitis as a complication of acute cholecystitis was successfully carried out in 67.3% of patients in the main group.

Key words

Acute cholecystitis, bile peritonitis, surgical treatment.

Biliary peritonitis is a severe complication of acute cholecystitis. At the same time, despite the seriousness of this problem, little attention is paid to bile peritonitis, although mortality in this complication reaches, according to different authors, from 6.2 to 24% [2, 5, 11, 16]. Among the causes leading to the development of bile peritonitis, the main ones are destructive forms of inflammation of the gallbladder. At the same time, a feature of bile peritonitis, in contrast to bacterial peritonitis, is the blurring of the clinical picture, which often leads to delayed diagnosis. Depending on the sterility of bile, choleperitoneoma most often develops and this is quite often observed when bile is sweated through the wall of the gallbladder without perforation. For the treatment of biliary peritonitis, laparotomy or relaparotomy is usually used , which in itself is a very traumatic intervention, in which postoperative mortality reaches 9.1–22.5% [1, 4, 8, 9, 14]. The outcome of surgical interventions largely depends on the choice and sequence of surgical correction methods used [7, 13, 15]. Further prospects for improving the results of surgical treatment of patients with bile peritonitis currently depend on the use of sparing minimally invasive surgical interventions -

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puncture drainage and endoscopic, operations before the development of a systemic inflammatory response of the body and abdominal sepsis [3, 6, 10, 12, 17].

Thus, the surgical treatment of biliary peritonitis is a complex tactical and technical problem, the solution of which is the subject of our study.

Material and research methods. The results of treatment of 82 patients with biliary peritonitis as a complication of acute destructive cholecystitis, which accounted for 7.1% of all 5849 operated patients with cholelithiasis , are presented . Among patients with peritonitis, there were 24 (29.7%) men and 58 (70.3%) women, the gender ratio was 1:2.5. The same ratio among all operated patients with cholelithiasis was 1:6, which confirms the literature data on a more complex course of cholelithiasis in males. Patients aged 60-74 years prevailed - 35.2% and 45-59 years - 28.2%, 8.3% of patients were over the age of 75 years. The mean age of the patients was 55.2±1.3 years. Concomitant diseases were present in 62.6% of patients. Cholangitis, as a complication of the underlying pathological process, was detected in 51.1% of patients. Chronic concomitant pathology of two systems was noted in 41% of patients, three or more in 26%. Taking into account current trends in the development of surgery, in order to solve the research problems aimed at developing a new treatment and diagnostic tactics for GB, the patients were divided into two groups. Group I (comparison group) included 33 patients with peritonitis as a complication of acute destructive cholecystitis, operated in the period 2001-2010, in the complex treatment of which standard generally accepted approaches were used. The second group (the main group) included 49 operated in the period 2011-2020, in which the algorithm for conducting diagnostic and treatment measures was based on the principles of FTS - the accelerated recovery program (APC) and minimally invasive surgical interventions were used as priority methods of surgical treatment . According to the mechanism of bile leakage into the abdominal cavity as a complication of acute destructive cholecystitis, we observed two types of forms of bile peritonitis: perforated and flowing . Perforated bile peritonitis occurred in 27 (32.9%) patients (12-group comparison, 15 - main group), which manifested itself as an acute catastrophe in the abdominal cavity against the background of destruction and perforation of the gallbladder wall. Perforated bile peritonitis developed against the background of destructive cholecystitis without perforation of the gallbladder wall, and since there was a gradual perspiration of bile into the free abdominal cavity, peritonitis proceeded with subtle symptoms. Only with a significant accumulation of bile in the abdominal cavity, signs characteristic of peritonitis appeared, which caused them to be delivered to a surgical hospital. According to our observations, perforative peritonitis occurred in 55 (67.1%) patients (21-gr. comp., 34-gr.). Thus , in our observations, there is a significant prevalence (more than 2 times) of flowing bile

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peritonitis. Among 82 patients with destructive cholecystitis complicated by biliary peritonitis, according to the nature of the pathological process, leakage was observed in 55 (67.1%) patients, of which diffuse - in 9 (16.4%) and delimited - in 46 (83.6%) . Perforated bile peritonitis was in 27 (32.9%) patients, of which diffuse - in 10 (37.1%) and limited - in 17 (62.9%). At In a patient with perforated and perforated bile peritonitis upon admission to the hospital, an acute onset of the disease was noted in 27 (32.9%) and a gradual increase in 55 (67.1%). A more severe form - diffuse bile peritonitis was observed in 23.2%, i.e. in ¼ of the patients. On the first day of the disease, 31 (37.8%) patients were admitted, on the second day - 22 (26.8%), on the third - 18 (21.9%), from four to seven days -6 (7.3%) and more than seven days -5 (6.1%). Thus, a significant percentage of late hospitalization of patients can be noted, which is explained by their late seeking medical help as a result of an inadequate assessment of their condition. During hospitalization, a relatively satisfactory general condition was noted in 17 (20.7%) patients, moderate - in 31 (37.8%), severe - in 24 (29.3%) and extremely severe - in 10 (12.2%)) patients. Based on the criteria for diagnosing sepsis, systemic inflammatory response syndrome (SIRS) was observed in 114 (87%) patients, 10 of them were in a septic state. Of the 82 patients admitted to the hospital with biliary peritonitis, 31 (37.8%) were operated on within the first 6 hours. Within 6 to 24 hours, i.e. 43 (52.4%) patients were operated on the first day. Later than a day from the moment of admission to the clinic, the operation was performed in 8 (9.8%) patients. In patients of the comparison group, depending on the volume, the operations performed were divided into 3 types: - cholecystectomy , sanitation and drainage of the subhepatic space were performed in 19; – cholecystectomy , sanitation and drainage of the abdominal cavity performed 9; – cholecystectomy , choledocholithotomy , sanitation and drainage of the subhepatic space were performed in 5 patients. In all cases, a wide upper median approach was used.

In the main group of patients, the following types of operations were performed: microcholecystostomy and puncture with a beater under ultrasound guidance 11; LCE, sanitation and drainage of the subhepatic space were completed 9; LCE, sanitation and drainage of the abdominal cavity (right lateral canal and small pelvis) 4.; LCE, sanitation and drainage of the subhepatic space, EPST 3; ChE from minilaparotomic access and choledocholithotomy , drainage of the choledochus and sanitation and drainage of the subhepatic space 6; ChE, sanation and drainage of the abdominal cavity from an open wide laparotomy access in 16 patients.

In the main study group, in 11 patients with acute destructive cholecystitis and delimited accumulation of bile in the subhepatic space with an initially severe general condition, gallbladder decompression was performed using percutaneous

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transhepatic microcholecystostomy (CCMCS) and puncture of the biloma under ultrasound guidance. After performing microcholecystostomy , these patients underwent ultrasound-guided puncture with a beater to evacuate a limited accumulation of fluid in the abdominal cavity. Laparoscopic cholecystectomy was completed by sanitation and drainage of the subhepatic space in 9 patients with acute destructive cholecystitis and local peritonitis. In diffuse bile peritonitis, LCE was supplemented by sanitation of the abdominal cavity with mandatory additional drainage of the right lateral canal and the pelvic cavity in 4 patients. 3 patients in combination with choledocholithiasis after LCE underwent EPST, 6 patients underwent CE and choledocholithotomy from an open mini-access . At the same time, in 16 patients with diffuse bile purulent peritonitis, CE and sanitation of the abdominal cavity was performed through a wide laparotomy access.

Thus, according to the principles of minimally invasive interventions in the main study group, 33 patients (67.3%) with acute destructive cholecystitis complicated by various forms of biliary peritonitis were operated on.

Results and its discussion. In patients of the comparison group with biliary peritonitis as a complication of acute destructive cholecystitis (33 patients), all surgical interventions (100%) were performed through a wide laparotomic approach . Various purulent-septic complications after operations for acute destructive cholecystitis and bile peritonitis were observed in 11 patients of the comparison group, which amounted to 33.3%. At the same time, in 2 (6.1%) bilomas formed again in the subhepatic region, which were drained by recanalization . counteropening . In 2 (6.1%) patients, prolonged bile leakage from 2 to 4 weeks from the drainage tubes installed in the subhepatic space was observed, 4 (12.1%) patients underwent repeated relaparotomy operations with repeated sanitation of the abdominal cavity due to ongoing peritonitis, 1 autopsy and drainage of subhepatic and subdiaphragmatic abscesses. Also, 1 patient was re-operated for cholemic intra-abdominal bleeding. In 9 (27.3%) patients, suppuration of the postoperative wound was observed. The most formidable complication of biliary peritonitis in the study group of patients was abdominal sepsis, which was the cause of death in 2 patients, mortality was 6.1%. In the main group of patients (49 patients) with biliary peritonitis as a complication of acute destructive cholecystitis, according to the principles of FTS, minimally invasive intervention in 33 patients (67.3%). They performed the following operations using video endoscopic technology in 16 patients (32.6%): - LCE and drainage of the subhepatic space in 9 patients with acute destructive cholecystitis complicated by local bile peritonitis; – LCE and drainage of the abdominal cavity (right lateral canal and small pelvis) 4 in acute destructive cholecystitis complicated by diffuse bile peritonitis; LCE and drainage of the subhepatic space, EPST 3 with a combination of acute destructive

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cholecystitis with choledocholithiasis . In these patients, EPST was performed in a 2-stage. 11 (22.4%) patients used diapeutic technologies - microcholecystostomy and puncture with a beater with ultrasound guidance.

In the main study group, postoperative complications developed in 8 patients, which amounted to 16.3%. At the same time, bilomas subhepatic region re-formed in 2 (4.1%) patients who were successfully sanitized by ultrasound-guided punctures. One patient had cholemic bleeding from the liver from the area of transhepatic puncture of the gallbladder. External bile leakage was also observed in 1 patient; relaparoscopy revealed a failure of the cystic duct stump, which was repeatedly clipped . Duodenal bleeding was noted in 1 patient after EPST, bleeding was stopped by conservative measures. In 1 patient, a subdiaphragmatic abscess was formed, sanitized by repeated 3 punctures under ultrasound control. With ongoing peritonitis, relaparotomy was performed in 1 patient, suppuration of the postoperative wound was observed in 5 patients. At the same time, in the main group, 2 out of 49 operated patients also died, the mortality rate was 4.1%. The reason for the poor outcome was acute pancreatitis as a complication of transduodenal endoscopic intervention in 1 patient and ongoing peritonitis in 1 observation.

Conclusions: 1. Biliary peritonitis as a complication of acute destructive cholecystitis was observed in 7.1% of patients. Prevalence of the perforative form of peritonitis was noted, which was observed in 67.1%, bile peritonitis due to perforation of the gallbladder wall was observed in 32.9% of patients.

2. The priority use of minimally invasive surgical interventions (diapeutical and laparoscopic methods) in the treatment of local bile peritonitis as a complication of acute cholecystitis was successfully carried out in 67.3% of patients in the main group. Performing CE and sanitation of the abdominal cavity from a wide laparotomy access was necessary in 32.7% of cases with diffuse bile-purulent peritonitis. 3. Optimization of tactics of surgical treatment of patients with bile peritonitis, based on the principles of differentiated priority use of minimally invasive surgical interventions, improved the results of treatment of the main group of patients, where purulent-septic complications amounted to 16.5%, mortality was 4.1%, while in the comparison group - 33.3% and 6.1% respectively.

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