Iatrogenic complications after laparoscopic cholecystectomy and prevention of their complications

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ABSTRACT

In the current article, the causes of iatrogenic injuries were studied in 1890 laparoscopically performed cholecystectomy operations and in 84 patients after it. By dividing them into three groups according to time, complications were eliminated in selected operative methods. It was stated that the post-operative periods of these patients were analyzed and the stenotic complications were identified and eliminated by modern methods.

Keywords: Cholecystectomy, iatrogenic complications, external liver tumors, iatrogenic damage and scar narrowing, diagnosis

Relevance. Recently, the increase in the incidence of gallstone disease has led to a significant increase in the number of surgical interventions performed. Currently, operations on the extrahepatic biliary tract are performed in most medical institutions by surgeons of various skill levels. This is inevitably accompanied by an increase in the frequency of various complications, including iatrogenic injuries, which are the cause of the formation of cicatricial structures of the extrahepatic bile ducts (1,2,4).

In connection with the emergence and development of modern technologies in surgical hepatology, the issues of diagnosis and treatment of iatrogenic injuries of the extrahepatic biliary tract and external biliary fistulas. They have become even more important. (3,5,8). In recent years, with the widespread use of laparoscopic cholecystectomy, especially at the stage of mastering this technique and various complicated forms of acute cholecystitis. So if often iatrogenic damage to the bile ducts was stable in recent decades and amounted to 0.05 - 0.2%, then with the use of LCEC it increased to 0.8 - 4% (6.9 11).

Along with the extensive literature devoted to the study of reconstructive hepetobiliary surgery, we have to admit that many questions in this direction are far from being resolved, and some of them are in their infancy. This is especially true for iatrogenic injuries of the extrahepatic biliary tract (7,9,13,15).

In reconstructive surgery of the biliary tract, he outlined serious progress, primarily associated with the active introduction of modern methods of endoscopic and X-ray endovascular surgery, the use of precision technology and biomaterials (10,14) . However, despite this, reconstructive surgeries on the left ducts in 4.5-25 % of cases are accompanied by the development of narrowing of the superimposed biliodigistic and biliary - biliary anastomoses (-), disavuiria, the results of reconstructive surgeries and lead to aggravation of the severity of the patient's condition.

Surgical interventions are accompanied by a large number of complications, and mortality reaches 15-30%. In this regard, there has recently been increasing interest in minimally invasive methods of restoration. bile flow and, first of all, endoscopic interventions. Currently, endoscopic methods of diagnosis and

treatment play an important role in diseases of the hepetobiliary system. As for the therapeutic possibilities of endoscopic methods, along with traditional methods of sanitation of hepeticocholedochus and restoration of an adequate passage of bile, such as endoscopic papillosphincterotomy, nasobiliary drainage, new endoscopic interventions are becoming widespread in clinical practice . These include mechanical lithotripsy, duodenbiliary drainage of hepaticocholedochus using endobilioprostheses (11,13)

Goal: The present study is to analyze the results of surgical treatment of patients with iatrogenic injuries with damage to the extrahepatic bile ducts (EBD) at the site of traditional treatment and using endoscopic technologies.

Material and methods: in the department of abdominal surgery of the Regional Multidisciplinary Medical Center and the department of emergency surgery of the Jalalquduk district for the period 2015 to 2020, various laparoscopic interventions were performed in 3115 patients aged 17 to 84 years, of which: cholecystectomy - 1890, women were 1587 (83%), men 303 (17%). chronic calculous cholecystitis was diagnosed in 1890 patients, acute - in 780, gallbladder polyposis - in 23, acute acalculous cholecystitis - in 19, chronic acalculous cholecystitis - in 15 of them was complicated by 84 patients with "fresh" iatrogenic injuries of the extrahepatic bile ducts of the HP during execution LHE. 7 patients were transferred from other clinics 6-9 days after injury with biliary peritonitis. Interoperative diagnosis of damage to the extrahepatic bile ducts was based on the appearance of bile in the surgical field; in the postoperative period, the diagnosis was based on the patient's complaints of jaundice of the sclera, darkening of urine, acholic feces, bile secretion through drainage, clinical signs of peritoneal irritation, symptoms of obstructive jaundice, cholangitis. To determine the level of damage, ultrasound was used, as indicated by ERCP, fistulography, CT and MRCT.

Results and its discussion. According to the nature of damage to the extrahepatic bile ducts, the patients were distributed as follows: parietal damage 28; full intersection 19; clipping hepaticocholedoch 8; partially coagulative necrosis 6; during the operation, erroneously partially removing part of the hepatic ducts was found in 3 patients.

Depending on the timing of the detection of bile duct injuries, the patients were divided into 3 groups.

1. Injuries discovered during surgery in 16 patients. In this group, the operations were completed as follows: 14 patients received a primary suture of the common bile duct on the drainage; cases, external drainage of the common bile duct was performed according to the Vishnevsky method. In 2 patients with a diagnosis of acute phlegmonous cholecystitis expressed by adhesive processes, it was operated on, during the operation there was a suspicion of partial resection of the hepatic duct with the gallbladder. Not finishing the operation, the histological material was examined and it was found that about 1.0 cm was resected hepaticocholedochus . The operation continued with the conversion of the damaged part of the hepaticocholedochus and the hepaticojejunostomy over Ru .

2. Damage was detected 5-8 days after surgery in 17 patients. In this group, 3 patients with various bile peritonitis and thin-walled choledochus made external drainage of the biliary tract according to the method of Vishnevsky. In 5 patients with complete clipping hepatico-choledochus , the removal of clips and external drainage on the T-shaped drainage according to Kare in one case and the imposition of hepaticojejunostomy with lost drainage were performed. In a patient who has a T-shaped drainage according to Kare , periodic attacks of cholangitis are noted . In 8 patients with diffuse bile peritonitis, hepatico-jejuno-anastomosis was performed on a loop isolated according to Roux with good results. In one patient, on the 5th day after laparoscopic cholecystectomy, a severe condition was transferred from another hospital, which was expressed by obstructive jaundice and pain under the hepatic region , phenomena of dynamic obstruction. After a one-

day preoperative preparation in the intensive care unit, a patient underwent a laparotomy; during the revision, a complete clipping was found hepatico choledochus and partially resected choledochus . Considering the condition of the patient, remove clipsy , hepaticocholedochus , external drainage was installed at the first stage of the operation. Three months later, the patient underwent an isolated Roux -en - Y hepaticojejunostomy .

3. Injuries found after discharge from the hospital, 2-4 weeks after surgery 8 patients. In this group, patients were admitted with symptoms of obstructive jaundice, external biliary fistula. After preparation, stabilization of the condition, various types of hepaticojejunostomy were performed along the Roux loop. To determine the cause of iatrogenic damage, we studied the history of patients, the state of the gallbladder and inflammation of the circumference during surgery. Of the 64 patients at admission, 29 patients were admitted on days 5-6 from the onset of an attack of cholecystitis. 35 patients were admitted 3-4 days. 24 patients with acute gangrenous form around large infiltrates and adhesive processes and local peritonitis. 29 patients with acute phlegmonous form around large infiltrates. 3 patient with a short neck of the gallbladder. 1 patient had a duplication of the gallbladder . The remaining 7 patients are technical errors of the operating surgeon.

After the operation, all patients were examined after 6 and 12 months and after 2 years. Of the 44 patients who did not have a hepatojejunal anastomosis, 9 patients had late complications. The structure of the extrahepatic bile ducts that have established endoscopic methods of diagnosis and treatment play an important role in the hepatobiliary system. All 12 patients succeeded in stenting with the help of an endoscope. stenotic part of the extrahepatic bile ducts.

Conclusions: 1. During the operation it is necessary to take into account the history and inflammation of the hepatobiliary zone. Which can be complicated by iatrogenesis.

2. The best results were obtained when performing hepaticojejunostomy on a loop of the small intestine isolated according to Roux. The immediate postoperative period was uneventful, the patients were discharged on the 8-12th day in a satisfactory condition with normal liver function. Long-term results within 1-3 years were followed up in 19 patients. Good results were obtained in 11 patients who underwent hepaticojejunostomy with paternal drainage. A satisfactory result was noted in 5 patients who, after removal of the drains from the bile ducts, are worried about recurrent pain in the right hypochondrium, attacks of cholangitis. In 3 patients who underwent primary plastic surgery of the choledochus, narrowing of the hepaticocholedochus developed within 6-15 months , which required endoscopic stenting .

3. With parietal wounds of the extrahepatic bile ducts, identified during the operation, it is possible to perform suturing and drainage on the T - shaped drainage through the stump of the cystic duct. With complete intersection of the choledochus, primary plasty is performed, which in almost 100% of cases leads to stenosis. The operation of choice is a hepaticojejunostomy with a lost drainage, which is performed with a precision operating technique using monofilament suture materials.

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