ISSN NO: 2770-2936
Date of Publication:30-05-2022

Optimization of Surgical Management in Postoperative Bile Leakage and Bilic Peritonitis After Cholecystectomy

Arziev Ismoil Alievich - Candidate of Medical Sciences, Associate Professor
Kurbaniyazov Zafar Babazhanovich - Doctor of Medical Sciences, Professor
Sayinaev Farrukh Karamatovich - Assistant
Baratov Manon Bakhramovich - Postgraduate
Nazarov Zokir Norzhigitovich - Assistant
Samarkand State Medical Institute, Uzbekistan.

Abstract. This study analyses the results of surgical treatment of 3266 patients with various forms of cholelithiasis. Biliary leakage and biliary peritonitis in the postoperative period were observed in 34 patients due to "minor" damages (aberrant hepatic and urinary ducts of the gallbladder bed - Luschka's passage, leaky stump of the gallbladder duct, drainage falling out of the choledoch). Improved surgical tactics based on ultrasound and RCCG data facilitated improvement of treatment results and avoiding relaparotomy in 94,2% of cases with bile leakage with "minor" bile duct injuries.

Keywords: cholecystectomy, biliary leakage, biliary peritonitis, surgical tactics.

Relevance:

The leading place in the structure of postoperative complications after cholecystectomy (CE) is occupied by external or intra-abdominal bile leakage (BI) in the early postoperative period, which should be considered as an independent problem, since it can have serious consequences and be life-threatening [1,3,16]. The main causes of postoperative GI are the so-called. "small" injuries of the bile ducts (aberrant hepatocystic ducts of the gallbladder bed - Luschka's passages, leakage of the stump of the cystic duct) and "large" - iatrogenic injuries of the main bile ducts [5].

The outflow of bile through the drainage contributes to the early diagnosis of biliary complications, but even a small bile leakage into the abdominal cavity can lead to serious complications [4,7]. Diagnosis of intra-abdominal bile leakage is a difficult task, the presence of safety drainage in the subhepatic space contributes to early diagnosis and prevention of biliary peritonitis [8, 9].

Purpose of the study:

To improve the results of surgical treatment of patients with cholelithiasis (GSD), who developed external or intra-abdominal FI after surgery, using relaparoscopy, transduodenal endoscopic interventions, ultrasound-guided puncture methods to reduce the number of repeated laparotomic operations.

Material and research methods.

The results of surgical treatment of 3266 patients operated on in the period 2011-2021 were analyzed. regarding various forms of cholelithiasis, which underwent CE: - laparoscopic access - 1947, mini-access - 1093, wide laparotomy - 226.

The diagnostic program included a standard general clinical examination, ultrasound, endoscopy, according to the indications of RPCH, MSCT, MR cholangiography. All interventions were completed by draining the abdominal cavity with one or two drains.

In the early postoperative period, 49 (1.5%) patients had GI and postoperative biliary peritonitis. Women - 31, men - 18, the average age of patients was 49±5.1 years. In 34 patients, the cause of VE was "small" lesions, in 11 - "large". The cause of bile leakage in 34 (69.3%) patients (i.e., in more than 2/3 of cases) was "small" damage, the sources of bile leakage in which were aberrant hepatocystic ducts of the gallbladder bed (Lushka's passages) - 8, failure cystic duct stump - 6; This study did not include patients with iatrogenic (“large”) injuries of the main bile ducts.

ISSN NO: 2770-2936
Date of Publication:30-05-2022

GI was observed in 16 (47.1%) patients operated on for chronic cholecystitis and in 18 (52.9%) patients with acute cholecystitis. In 22 (64.7%) patients, the flow of bile through the drainage was noted, and in 12 (35.3%) patients, the accumulation of bile in the abdominal cavity was diagnosed after removal of the drainages according to ultrasound data.

To assess postoperative GI, we took into account both the daily flow of bile from the abdominal cavity drains and ultrasound data - we determined the volume of delimited fluid accumulation in the projection of the removed gallbladder bed, as well as the localization and volume of free fluid in the abdominal cavity.

Results and its discussion.

In 24 patients with GI with bile discharge through the drainage in a volume of 150-200 ml per day and in the absence of signs of peritonitis, a satisfactory condition of patients, no changes in blood tests, dynamic monitoring was performed with obligatory ultrasound control and conservative treatment (antispasmodics, infusion, anti-inflammatory and antibacterial therapy). In 19 patients, the treatment was effective, bile leakage through the drainage progressively decreased and completely stopped within 5-7 days, so no other diagnostic and therapeutic procedures were required.

3 patients required punctures of the biloma under ultrasound control in order to evacuate the accumulation of fluid in the subhepatic space, and in 1 patient the cause of bile leakage was the loss of drainage from the choledochus.

In 2 more patients, conservative treatment was also ineffective and they underwent retrograde cholangiopancreatography (RPKhG) and endoscopic papillosphincterotomy (EPST). In 1 patient, the cause of bile leakage was the failure of the stump of the cystic duct, in another 1 patient, the source of FI was not identified. After endoscopic drainage of the biliary system, bile leakage in these patients stopped on days 2 and 5.

In the presence of FI in the control drainage of more than 200 ml within 2-3 days after surgery, 12 patients underwent ultrasound of the abdominal cavity, RPCG, if necessary, decompression of the biliary tract by endoscopic papillotomy and the establishment of nasobiliary drainage. In 6 patients, EPST with nasobiliary drainage proved to be effective and GI was stopped within 5-7 days. With the failure or ineffectiveness of RPCG and nasobiliary drainage, persistence or intensification of abdominal pain, symptoms of intoxication and irritation of the peritoneum, 4 patients underwent relaparoscopy with additional electrocoagulation of beds and of the gallbladder, clipping of Luschka's passages or an incompetent stump of the cystic duct, adequate sanitation and drainage of the abdominal cavity.

Laparotomy, choledochostomy, sanitation and drainage of the abdominal cavity with diffuse bile peritonitis were performed in 2 patients. Complications were noted in 2 (5.9%) patients (repeated bile leakage - 1, acute pancreatitis - 1).

A large number of works have been published in the literature on the problem of biliary complications associated with cholecystectomy. The frequency of such complications, according to a number of authors, ranges from 1.2 to 5.1%. In our observations, it was 1.5% for 3266 cholecystectomy. There are various, sometimes contradictory approaches, both to the choice of a method for verifying the source of bile leakage, to determining indications for re-intervention, and to choosing a method for correcting this complication. The reasons for the flow of bile from the stump of the cystic duct can be due to both its failure due to the displacement of the clip, and due to a rapid and significant increase in pressure in the ductal system in case of impaired patency at the level of the terminal section of the common bile duct. Bretucu E. et al. (2006) believes that the treatment of the cystic duct stump, performed against the background of inflamed and infiltrated tissues, as well as against the background of intraoperative bleeding, can lead to bile leakage due to incorrect clip placement. Similar consequences are caused by the use of clips of the wrong size, especially in cases of dilated cystic duct. Thus, we had to perform relaparoscopy with repeated clipping of the cystic duct in 4 patients.

The most important role in the pathogenesis of bile leakage after cholecystectomy belongs to unresolved biliary hypertension due to stricture of obstructive pulmonary edema, choledocholithiasis, and acute pancreatitis. The study by F.G. Nazyrov et al. (2019) indicates that the mechanism of bile leakage may be associated with functional hypertension in the biliary system, which is caused by inflammatory changes and increased liver function. Against this background, any minor damage to the small bile ducts in the

ISSN NO: 2770-2936
Date of Publication:30-05-2022

gallbladder bed on the liver during cholecystectomy can lead to severe postoperative bile leakage into the abdominal cavity. This opinion is shared by Kotecha K. et al. (2019). We performed EPST with the installation of nasobiliary drainage in 6 patients, which made it possible to stop biliary hypertension and thereby contribute to the cessation of GI.

The complexity of early diagnosis of intra-abdominal bile leakage leads to a belated re-surgical intervention and, as a result, to an unfavorable treatment outcome. On the other hand, according to A.G. Beburishvili et al. (2009), the difficulty of diagnosis also explains the unreasonable performance of relaparotomy in 2.7% of patients. In our study, relaparotomy was performed only in 2 patients with diffuse bile peritonitis.

Conclusions:

1. Postoperative bile leakage and bile peritonitis after CE was 1.5%, the cause of bile leakage in 2/3 of the patients was "small" damage - aberrant hepatic - cystic ducts of the gallbladder bed, failure of the cystic duct stump, loss of drainage of the common bile duct.

2. Therapeutic diagnostic algorithm for identifying the source of bile leakage and its correction should include ultrasound monitoring and diapeutic methods, transduodenal endoscopic interventions and relaparoscopy.

3. With the appearance of bile discharge through the control drainage in a volume of not more than 200 ml per day with a tendency to decrease and the absence of bile accumulation intraperitoneally and the clinic of bile peritonitis, conservative therapy can be limited.

4. The use of minimally invasive endoscopic transduodenal interventions, diapeutical methods and laparoscopy, as well as active conservative therapy allowed patients with bile leakage with "small" injuries to avoid relaparotomy in 94.2% of patients.

References:

1. Shukurullaevich, Dier Abdurakhmanov et al. “Tense hernioplasty and abdominoplasty in patients with morbid obesity.” Bulletin of Science and Education 3-2 (106) (2021): 88-98.
2. Shukurullaevich A. D. et al. Modern views on the pathogenetic relationship between systemic inflammation and the immune system with a bile peritonitis, complicated abdominal sepsis // Bulletin of Science and Education. – 2021. – no. 5-1(108). - S. 81-86.
3. Davlatov S. et al. Current State of The Problem Treatment of Mirizzi Syndrome (Literature Review) // International Journal of Pharmaceutical Research. - 2020. - T. 12. - S. 1931-1939.
4. Sulatanbaevich B.A. et al. Analysis of the results of surgical treatment of patients with thyroid nodules. Voprosy nauki i obrazovaniya. - 2019. - no. 4 (49).
5. Rakhmanov K. E., Davlatov S. S., Abduraxmanov D. S. Correction of albendazole disease after echinococcectomy of the liver // International Journal of Pharmaceutical Research. - 2021. - T. 13. - S. 4044-4049.
6. Abdurakhmanov D.S., Shamsiev Yu.Z. The current state of the problem of diagnosing thyroid nodes gland (literature review) // European studies: innovations in science, education and technology. - 2018. - S. 45-49.
7. Shukurullaevich A. D. et al. Modern views on the pathogenetic relationship between systemic inflammation and the immune system with a bile peritonitis, complicated abdominal sepsis // Bulletin of Science and Education. – 2021. – no. 5-1(108). - S. 81-86.
8. Shamsutdinov S., Abdurakhmanov D., Rakhmanov K. Repeated reconstructions of the digestive tract in the surgery of the operated stomach. – 2021. S. 49-50.
9. Shukurullaevich A. D. et al. Modern views on the pathogenetic relationship between systemic inflammation and the immune system with a bile peritonitis, complicated abdominal sepsis // Bulletin of Science and Education. – 2021. – no. 5-1(108). - S. 81-86.
10. Shukurullaevich A. D. et al. Analysis of surgical treatment options for different types of mirizzi syndrome // Bulletin of Science and Education. – 2021. – no. 5-1(108). - S. 71-76.
11. Shukurullaevich A. D. et al. Clinical questions extreme currents syndrome mirizzi //Bulletin of science and education. – 2021. – no. 5-1(108). - S. 65-70.

ISSN NO: 2770-2936
Date of Publication:30-05-2022

12. S. Shamsutdinov, D. Abdurakhmanov, K. Rakhmanov. - 2021, pp. 49-50.
13. Shukurullaevich A. D. et al. Biliary peritonitis as a complication of chronic calcular cholecystitis // Bulletin of science and education. – 2021. – no. 5-1(108). - S. 77-80.
14. Abdurakhmanov D., Sayfullaeva F. Surgical treatment of postoperative ventral hernia //Collection of scientific practice ΛΌGOΣ. – 2021. S. 55-57.