

ADVANTAGES IN COMPARING ENDOSCOPIC AND CONVENTIONAL SURGICAL INTERVENTIONS IN THE BILIARY TRACT

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Abstract

Traditional laparotomy choledocholithotomy, despite the possibility of performing any intervention on the extrahepatic bile ducts, in 1937.7% of cases is accompanied by the development of complications both in the early and late postoperative periods and is generally more difficult for patients than any other interventions [38.77]. Mortality after open interventions on extrahepatic bile ducts, according to a number of authors, reaches 7.8%. This circumstance makes laparotomy choledocholithotomy a less preferred method of treating patients with cholelithiasis complicated by choledocholithiasis, stenosing duodenal papillitis and their combination, limits its use and encourages the search for new ways to solve the problem.

Keywords: cholecystectomy, endoscopic papillosphincterotomy, endoscopic retrograde cholangiopancreatography, endoscopic transpapillary interventions.

Introduction

Due to the destructive effect of the shock wave on the surrounding tissues, a number of complications develop: hemobilia, hematuria, hematoma, etc. In 10% of patients, spontaneous movement of fragments of concretions along the biliary tract can be noted, which in 5-9% of all cases of extracorporeal shock wave lithotripsy leads to the development of acute biliary pancreatitis, mechanical jaundice, cholangitis [2,3].

In the early 70s of the last century, M. Classen was the first in the world to apply and describe the technique of endoscopic papillosphincterotomy. Endoscopic papillosphincterotomy (EPST) is especially relevant in patients with high operational risk and in patients with residual and recurrent choledocholithiasis [6,7].

With the development and improvement of endoscopic technologies, ultrasound and X-ray technology, transpapillary techniques have become the "gold standard" in the treatment of choledocholithiasis. Today, individual authors have accumulated the experience of thousands of



endoscopic operations. Nowadays, the indications for endoscopic papillosphincterotomy have been significantly expanded, which makes it the leading method of resolving choledocholithiasis [8,10,13,15]

However, despite all the advantages and attractiveness of endoscopic treatments for choledocholithiasis, there may be a number of difficulties limiting the use of EPST. Thus, an obstacle to endoscopic access to the large duodenal nipple may be parapapillary diverticula, strictures of the terminal choledochus of various origins, gastric resection in most modifications and a history of gastrectomy, Mirizzi syndrome, diverticula of the upper gastrointestinal tract [130,167,183]. The difficulties of EPST after gastric resection are associated both with the presence of a long adductor loop of the small intestine and with changes in the anatomy of the large duodenal nipple area - a consequence of previous surgery, which greatly complicates the cannulation of the Vater's nipple [9,12].

Parapapillary diverticula during EPST are quite common, in about 10-20% of cases [14,15]. To date, there is no consensus on the expediency of EPST in parapapillary diverticula. Some authors recommend refraining from performing endoscopic papillosphincterotomy for any or certain localization of the diverticulum, while others advise performing endoscopic papillosphincterotomy for all patients with parapapillary diverticula [9,13,14]. The main difficulties in the presence of parapapillary diverticula mainly lie in the visualization and cannulation of BDS [9,10].

According to the generally accepted opinion, "complex" cannulation of the large duodenal nipple increases the risk of bleeding in 1.3-9.5% of patients, duodenal perforation in 0.32-1.3%, and acute pancreatitis in 2.06% of patients [6,10,12]. In total, early complications after EPST occur in 5.4-15% of patients, and mortality ranges from 0.4-1.5%. The frequency of complications naturally increases in patients with altered anatomy of the bilioduodenal zone, with parapapillary diverticulum of the duodenum and after gastric resections in most modifications [9,14].

Complications of endoscopic papillosphincterotomy developing in the long-term postoperative period have been well studied. This period currently reaches more than 30 years of observation. Late complications such as recurrent Oddi sphincter stenosis and recurrent choledocholithiasis are reported by various authors to develop in 2.7-24% of patients [10,12].

Sphincter-preserving endoscopic techniques create great prospects in the treatment of choledocholithiasis and in the prevention of early and late postoperative complications. Balloon papillodilation was first performed by M. Staritz and co-authors in 1983 [12]. The great advantage of this technique is a lesser violation of the integrity of the sphincter apparatus of the large duodenal nipple, compared with endoscopic papillosphincterotomy, which results in the absence of bleeding after manipulation and perforation of the duodenum [10,11]. However, there are currently no uniform, generally recognized indications for performing endoscopic balloon papillodilation. Some authors suggest performing the intervention to all patients with common bile duct stones without exception, while others adhere to strict restrictions and believe that balloon papillodilation is indicated mainly in patients with severe coagulopathies. According to a number of scientists, the risk of developing acute pancreatitis during this intervention increases sharply [12,14], which limits the use of this procedure.

According to a number of authors, it is possible to perform antegrade balloon papillodilation during laparoscopic cholecystectomy through the stump of the duct of the gallbladder. Thus, antegrade



cannulation of the large duodenal nipple reduces the likelihood of developing acute pancreatitis due to its lesser traumatization [12,14].

For the first time, the technique of papillodilation with large diameter balloons (12-20 mm) after a preliminary partial papillotomy was applied by G. Ersoz and co-authors in 2003 [10,12] Balloon papillodilation after a preliminary partial endoscopic papillosphincterotomy leads to separation of the mouth of the common bile duct and the pancreatic duct, which significantly reduces the likelihood of postmanipulatory acute pancreatitis [103,164]. In addition, balloon papillodilation after partially performed endoscopic papillosphincterotomy is a fairly effective and safe treatment option in patients with diverticulum of the Vater's nipple zone [4,101,107,131] and, according to a number of authors [124,172], allows extraction of concretions up to 30 mm in diameter without mechanical lithotripsy.

In our country, endoscopic balloon papillodilation after partial endoscopic papillosphincterotomy has not been widely used, although this technique is actively used abroad.

The Purpose of the Study

The main purpose of this study is to improve the results of treatment of patients with choledocholithiasis, stenosing duodenal papillitis and their combination by introducing and improving methods of laparoscopic interventions on extrahepatic bile ducts.

Research Materials and Methods

Research was carried out in the surgical departments of the Andijan branch of the scientific center of Emergency Medicine of the Republic, in the Department of Neurosurgery of the adti clinic, in the private clinic of Carona MEDLAIN.

The study is based on an analysis of the results of the treatment of 115 patients with choledocholithiasis, stenosis duodenal papillitis from 864 patients who underwent cholecystectomy from January 2020 to December 2023. All patients are divided into two groups. The control group included 60 patients treated with choledocholithiasis, stenosis duodenal papillitis from January 2020 to December 2023. In the surgical treatment of tumor disease during this period, as a rule, without prior laparoscopy, mainly open cholecystectomy is used.

The main group included 55 patients who underwent surgery from January 2020 to June 2023. In this group, a two - stage treatment of choledocholithiasis is mainly used-endoscopic transpapillary lithoextraction, followed by laparoscopic cholecystectomy. Laparotomy is performed choledocholithomia if it is not possible to eliminate choledocholithiasis using endoscopic transpapillary interventions. Laparoscopic methods of treating cholelithiasis patients with choledocholithiasis and duodenal papillitis with stenosis are actively being introduced and improved to practice.

Research Results

In combination with the device, standard laparoscopic adapters are used for trocars from 12 to 10 and 5 mm (5), which are equipped with a rubber sealed ring (6) at the last. They are used to correct the difference in diameter between the troakar and the device and form a seal, preventing carbon dioxide from escaping from the abdominal cavity during tool use.

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The device was used in 23 patients. In 22 cases of the use of this device, the stones of the common grass roads, including several, were successfully removed. In any case, intraoperative complications were not observed. One patient had a firmly fixed rock at the terminal end of the common bile duct, which could not be removed using a developed device or other lithextracting instruments. In this case, the intervention ended with the laparoscopic formation of choledocoduodenoanastomosis. Thus, the efficiency of using a device developed to extract stones from non-hepatic bile ducts was 95.5% of the number of cases of using the device.

Our device for laparoscopic removal of stones from the grass paths we offer has the following advantages:

- the elasticity and elasticity of the material from which the device is made provide good absorption and sealing functions, thereby increasing the lithextractive properties of the device;
- processing the distal end of the device in the form of an internal cone ensures a more complete and rigid connection between the device and the extracted stone;
- the presence of an adapter in the form of a valve tee prevents the release of carbon dioxide from the abdominal cavity and helps to improve the antiseptic fluid and sanitary condition of the general bile duct;
- the presence of adapters for trocars from 12 to 5 and 10 mm in the kit prevents the loss of carbon dioxide and a decrease in pressure in the abdomen;
- simplicity of design and the presence of materials from which the device is made do not require serious economic costs and allow the device to be used in any medical institution.

The introduction into clinical practice of endovideoscopic technologies for the treatment of patients with choledocholithiasis, stenosis duodenal papillitis and their combination did not lead to a statistically significant increase in the number of intraoperative complications, despite the novelty of the technique. Obviously, at the stage of mastering the technique, the frequency of complications was slightly higher, but this did not affect the final result of surgical intervention. In our study, all 55 endovideoscopic interventions were successfully carried out. During operations, intraoperative complications sometimes arise, complicating and increasing the duration of the intervention.

Thus, in laparoscopic choledocholithotomy, 4 (7.27%) patients had a lumen opening of the gallbladder; a similar complication was observed in 2 (3.33%) patients in the control group. In 2 (3.64%) patients in the main group, diffuse bleeding from the gallbladder bed occurred during the operation, which was interrupted by a temporary tamponade of the bed. In the control group, such complications were observed much more often in 7-86 cases (11.67%), and bleeding was stopped mainly by sewing a gallbladder bed. Surgical trauma bleeding has been observed in 1 (1.82%) patients in the primary patient and 5 (8.33%) patients in the control group. Bleeding from the surgical area was more frequent in patients in the control group-5 (8.33%) compared to 2 in patients in the laparoscopic intervention group (3.64%). In 2 cases in each group, other complications occurred that were successfully managed without interrupting the intervention.

The analysis of the direct results of the treatment of cholelithiasis patients with choledocholithiasis, stenosis duodenal papillitis and a combination of them in the early postoperative period is based on the data obtained during this study. First of all, the final result of treatment, that is, the fact of eliminating choledocholithiasis and restoring the natural passage of



bile, was taken into account. Comparison of these groups of patients was also carried out according to other indicators: the duration of surgical intervention, the severity of the postoperative pain syndrome, the duration of the patient's stay in the hospital after the operation, the frequency and nature of complications, effectiveness. method of treatment and number of deaths.

In the main group, all patients with choledocholithiasis (n=55) underwent laparoscopic surgery. There was no conversion under any circumstances.

When analyzing the duration of surgical intervention, the average duration of the operation in the main group is 101.27 ± 19.81 minutes (the duration of the intervention is 90-173 minutes), the interval of the duration of the operation in the control group is recorded. It ranged from 80 to 165 minutes and averaged 96.7 ± 14.25 minutes (table 14). Statistical processing did not allow us to refute the null hypothesis that there were no differences in The compared groups. Thus, the average duration of laparoscopic intervention was slightly more than that of conventional laparotomy. The most important factor affecting the duration of the operation in the main group was the need to involve endoscopists in the intervention to perform intraoperative choledoxoscopy and abdominal intervention.

Conclusion

The purpose of this study was to improve the direct results of treatment for patients with choledocholithiasis, stenosis duodenal papillitis, and their combination by introducing and improving methods of laparoscopic intervention in the non-hepatic bile ducts.

On the example of the Andijan region, the study of the distribution of cholelithiasis and its complex forms, the algorithm for the endovideoscopic treatment of patients with choledocholithiasis, stenosis duodenal papillitis and their combination, the development of optimal techniques, a device for laparoscopic removal of stones. from non-hepatic bile ducts, evaluation of direct results of operations and determination of the location of endovideoscopic technologies in the treatment of choledocholithiasis and stenosis duodenal papillitis were the main tasks set during this study and successfully solved.

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