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Laparoscopic Exploration of Cbd for Failed Ercp in Larger Stones

Medical Science

KEYWORDS :

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INTRODUCTION

Conventionally, patients who failed endoscopic removal of common bile duct stones (CBDS) by endoscopic retrograde cholangiopancreaticography (ERCP) would be treated with open cholecystectomy and common bile duct exploration. Laparoscopic common bile duct exploration (LCBDE) is an established option for treating CBDS. The aim of this paper was to look at the feasibility of LCBDE as a salvage procedure after failed endoscopic stone extraction (ESE). The secondary endpoint was to examine the short-term outcomes of our LCBDE series. Secondary bile duct stones are present in as many as 15% of patients with gallstones. They are associated with severe complications, such as pancreatitis and cholangitis. After the introduction of laparoscopic cholecystectomy, endoscopic retrograde cholangiopancreatography (ERCP) replaced open surgery as the gold standard for the treatment of common bile duct stones. The benefits of the preoperative endoscopic treatment (ERCP) followed by

Laparoscopic exploration are substantially better compared with open surgery, regarding postoperative pain, hospital Stay.

However, ERCP has some issues, such as procedure-related complications and failed ERCP. The limitations of endoscopic treatment are related to the complexity of doing a correct cannulation of the ampulla of Vater and stone retrieval. Patients with failed ERCP are considered high-complex cases. The failure in retrieving bile duct stones by using ERCP is an absolute indication for performing CBDE. The objective of this article is to report our experience with **Laparoscopic exploration of CBD for failed ERCP in larger stones**

METHODS

In this study 25 patients with the indication of common bile duct exploration between January 2015 to December 2015 were included. Preoperative evaluation included liver function tests, ultrasound, and cardiovascular evaluation.

RESULTS

Nine of the 25 patients included in this study after a failed ERCP. A 1-step approach, LCBDE_LC, was performed in the other 16 patients. The failed ERCPs were due to the difficulty in cannulating the ampulla of Vater (4 patients) and difficulty in stone retrieval (5 patients), due to the presence of intrahepatic bile duct stones or huge common bile duct stones

These 9 patients were operated on with the intention of performing LCBDE; however, the conversion rate was 33.3%. Intrahepatic bile duct stones and embedded stones in the ampulla of Vater were the cause of conversion to an open procedure. The hospital stay was 4.5 days (range, 2 to 8), which is related to the conversion rate shown, and also because these patients underwent a common bile duct exploration via choledochotomy. The success rate was 80%.

The same happens when operative time and hospital stay. However, because this series is small, no statistical significance in these parameters exists.

DISCUSSION

After its introduction in the 1970s, ERCP along with the endoscopic sphincterotomy became the gold standard in the treatment of common bile duct stones. This procedure is done in patients with a high-suspicion of common bile duct stones or patients with demonstrated bile ductstones. ERCP effectiveness is between 75% and 90%. This endoscopic procedure (ERCP) has some failure-related factors, such as postsurgical gastrointestinal anatomic variations (Billroth II), duodenal diverticulum, embedded stones in the ampulla of Vater, intrahepatic bile duct stones, and common bile duct strictures. The presence of a duodenal diverticulum is frequent,particularly in the elderly. Ampullae of Vater located at the bottom of the diverticulum are the main cause of failure in cannulation and stone retrieval. Cannulation rate in juxtapapillarydiverticulum is 78% and 38% when the ampulla is at the bottom. The presence of several stones or big stones is usually the cause of ERCP failure. The multiple attempts and maneuvers performed increase the complication rate, such as pancretitis, bleeding, or perforation.

Causes of ERCP Failure in Patients Admitted With Unresolved Choledocholithiasis

1-Impossbility in Cannulating the Ampulla of Vater

2. Difficulty in Stone Retrieval- Intrahepatic stones and Big and multiple stones.

Biliary strictures are another cause of ERCP failure. Fortunately, they are infrequent in our area. Billroth II gastrectomy is considered a big challenge for ERCP performers with success rate barely reaching 60%. The complexity is not only due to the difficulty in reaching the ampulla butalso in achieving the exact location of the endoscope prior to cannulating it.Surgery must be performed in every patient with a failed ERCP. With the advance in minimally invasive surgery, LCBDE is now considered effective, safe, and feasible.The development of new surgical techniques and reaching the learning curve for LCBDE has led to considering the 1-step approach as an option for patients with gallstones and suspected choledocholithiasis. The United States National Institutes of Health consensus and the British Society of Gastroenterology recommendations report LCBDE as effective as ERCP in the treatment of choledocholithiasis. We strongly suggest the routine use of the choledochoscopeassistance in all cases. It has been our standard procedure. In our experience, the success rate of the blind basket technique or under fluoroscopic guidance is as low as 30%. We have been performing LCBDE since 2005 with a global success rate of 80%, morbidity of 8%, and no mortalities.16-18 However, when analyzing the cases of failed ERCP only, we notice that the effectiveness decreases (66%). The main causes of conversion to an open procedure, as in

specialized centers, are the presence of intrahepatic bile duct stones and embedded stones in theampulla of Vater.27 There are no preoperative indicators for LCBDE failure.

CONCLUSION

Similar to the findings of Karaliotas et al in 2008,28 who reported a success rate of 64.5%, this study shows that patients with failed ERCP should definitely be considered complex cases. In these patients, the effectiveness of the laparoscopic procedure decreases, and the conversionrate increases considerably.

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