Case report

Giant choledocholithiasis: a case report

ABSTRACT

Introduction

Large common bile duct stones often pose therapeutic challenges and frequently require surgical exploration. Though endoscopic techniques are the preferred modality of management, they are often unsuccessful in retrieval of larger stones. Here we describe a case report of a giant common bile duct stone and its subsequent management.

Case report

A 75-year-old male presented with right upper quadrant abdominal pain, and on evaluation he was diagnosed to have a giant common bile duct calculous. After failed endoscopic intervention, the patient subsequently underwent surgical exploration where the stone was extracted and Roux-en-Y hepaticojejunostomy was done.

Conclusion
Surgical exploration plays an important role in the management of common bile duct stones, especially in larger stones. Although surgery is now limited to patients with endoscopic failure, surgery provides better evacuation rates and decreased morbidity for large common bile duct stones.

Keywords: Large common bile duct stone, Choledocholithiasis, Giant, Gallstones

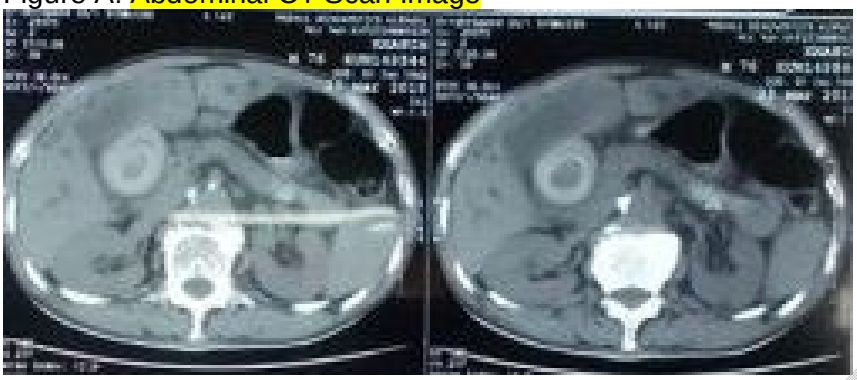
INTRODUCTION

Cholelithiasis and choledocholithiasis are of common occurrence in surgical practice. Currently, Endoscopic retrograde cholangiopancreatography (ERCP) is the preferred and initial modality of treatment for common bile duct (CBD) stones. Choledocholithiasis may be treated as a two-step procedure involving initial endoscopic CBD stone extraction followed by laparoscopic cholecystectomy, or a single-step procedure which includes laparoscopic CBD exploration along with cholecystectomy. Other indications for surgery include failed ERCP after multiple attempts, large CBD stones, and anatomical factors precluding endoscopic intervention.

CASE REPORT

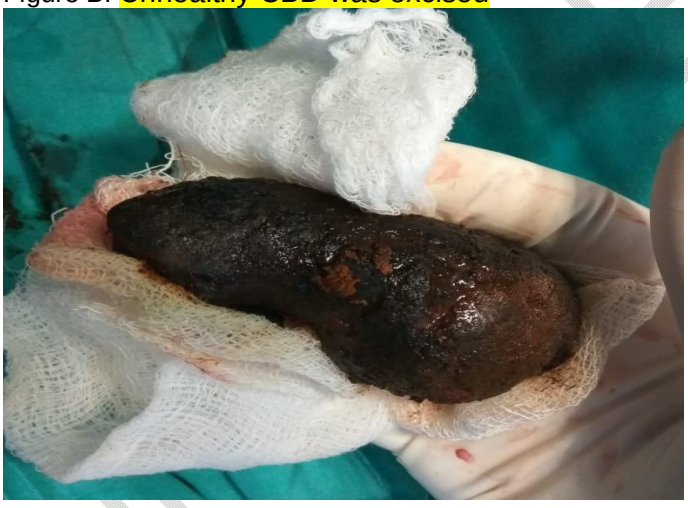
A 75-year-old man presented with pain in the right upper abdomen for 1 week. He denies any history of fever, yellowish discoloration of eyes, loss of appetite or weight. On examination, mild tenderness was noted in the right hypochondrium. His blood work up was normal except for a mild rise in Alkaline phosphatase of 152 IU/L. Ultrasound of the abdomen revealed dilated common bile duct (CBD) without gallstones or intrahepatic biliary radicle dilatation. Abdominal CT showed a large common bile duct stone of size 8x4cm along with dilatation of CBD (Figure A).

Figure A: Abdominal CT Scan Image



Initial stone extraction was attempted with ERCP but was unsuccessful owing to the size of the stone. After multiple attempts, the patient was planned for surgical exploration. Intraoperatively, there was gross dilatation of the CBD containing a giant choledocholithiasis of size 8.5 x 4cm. The stone was extracted, unhealthy CBD was excised and Roux-en-Y hepaticojejunostomy was done along with cholecystectomy (Figure B). Postoperative events were uneventful, and the patient was discharged on postoperative day 6.

Figure B: Unhealthy CBD was excised



DISCUSSION

Choledocholithiasis may occur in up to 20% of patients with gallstones, and in around 50% of these patients, they are asymptomatic [1]. In those patients who undergo surgery for cholelithiasis, CBD stones are found in 3-10% of the patients [2]. Abdominal ultrasound and magnetic resonance cholangiopancreatography (MRCP) are the two commonly used diagnostic modalities for CBD stones [3]. MRCP is considered the gold standard for diagnosing choledocholithiasis, but may miss smaller stones of size less than 5mm [4].Endoscopic ultrasound is a valuable tool for detecting gallbladder microlithiasis and acute pancreatitis of unknown origin [5].

There is no consensus on the definition of a large CBD stone. However, CBD stone of more than 2 cm is considered a large CBD stone[6]. The term 'difficult stone' has been used for large stones, that include stones which are multiple, impacted, or of intrahepatic locations. The risk factors for difficult stones include those that have a high chance of endoscopic failure, which include distal biliary stricture, stone diameter of more than 1.5 cm, multiple stones more thanthree, and presence of a periampullary diverticula[7].
The majority of CBD stones have been successfully removed by endoscopic techniques, such sphincterotomy, using balloon trawling or dormia basket[8]. However, the extraction rates of larger CBD stones (>1cm in diameter) has been low [9], and these patients are often referred for surgical exploration. Though the complete retrieval of large CBD stones has been low with ERCP, few authors have described successful retrieval of giant caliculi using endoscopic techniques such as lithotripsy [10–12].
With the advent of technological innovations in endoscopic intervention, the role of surgery has reduced considerably. Nevertheless, laparoscopic or open surgery plays an important role in dealing with difficult CBD stones and multiple studies have shown laparoscopic CBD extraction resulted in lower morbidity and complete evacuation of CBD stones[13–15].

CONCLUSION

Choledocholithiasis is a common entity in surgical practice that can occasionally enlarge to form giant stones. Though the endoscopic procedures are becoming the standard of care, surgical exploration provides complete clearance, especially for larger stones.

CONSENT

All authors declare that 'written informed consent was obtained from the patient (or other approved parties) prior to undergoing treatment.

ETHICAL APPROVAL

Not applicable

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