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A Rare Case of Choledocal Cyst Presented as Chronic Abdominal Pain and Jaundice

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Abstract: ***We report a Adult case of Type 1C choledochal cyst presented as chronic abdominal pain with lump formation in right hypochondriac region. Choledochal cyst is an abnormal expansion of the biliary tract. The Type 1 choledochal cyst is the cystic dilation of the common bile duct. The Type Ic choledochal cyst is the fusiform dilatation of the common bile duct with an anomalous pancreaticobiliary junction. Patients with choledochal cysts may have the formation of cholelithiasis due to chronic biliary stagnation and repeated inflammation. Cholelithiasis may fall into the common bile duct to cause biliary colic. Abdominal ultrasonography can be used as a preliminary examination.***

Keywords: Adult age, Choledochal cyst, Abdominal pain, Jaundice, MRCP, Roux - en - Y hepatico jejunostomy

1. Introduction

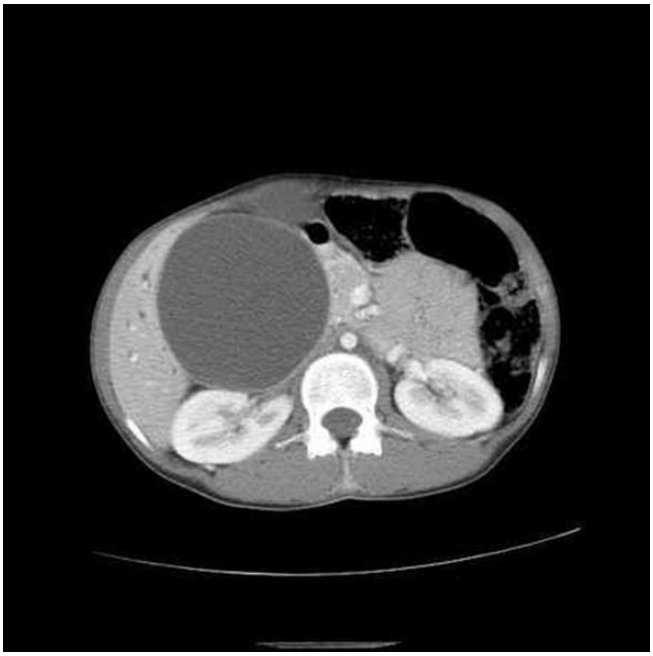
Choledochal cysts are often diagnosed before the age of 10 years and are more common in females. The common symptoms are repeated abdominal pain, jaundice, and abdominal masses or lump. Patients with choledochal cysts, due to chronic biliary stagnation and repeated inflammation, will experience the formation of biliary sludge, which will then lead to cholelithiasis. Cholelithiasis may fall into the common bile duct to cause biliary colic. If these symptoms are portrayed, an abdominal sonography can be used as a preliminary examination. We report a adult case of choledochal cyst presented as chronic biliary colic pain with abdominal lump formation and jaundice.

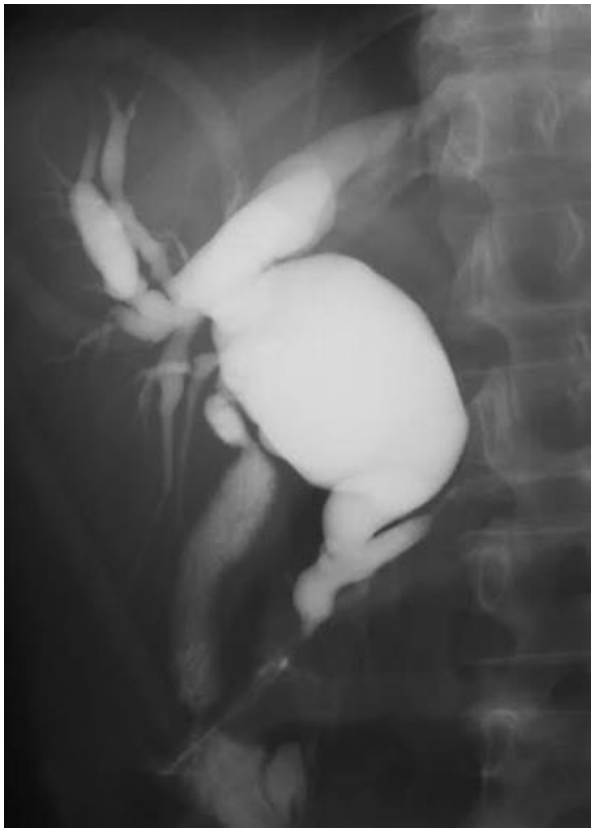
2. Case Presentation

This is a 25 - year - old male patient with chronic abdominal pain with jaundice and abdominal lump formation. The family history was not remarkable. Patient having complain of abdominal pain after meal. Patient also had multiple episodes intermittent vomiting since last 6 month without fever. Intravenous analgesics were administered for pain control. Physical examination showed apparent tenderness and knocking pain over the right upper quadrant abdomen with Abdominal lump of approximately 10*8 cm^2 size with yellow discolouration of sclera.

The patient was admitted for further evaluation and treatment.

Abdominal X - ray was normal. Abdominal CT with contrast finding suggestive of Approx.16 x 10 cm sized well defined large non enhancing cystic lesion is noted at hepatic region with moderate dilatation of IHBR and adjacent visualised part of CBD seen. The large cystic lesion shows communication with the proximal part of the CBD. The large cystic lesion causes compression effect over and/or displacement of adjacent structures including gallbladder bladder (anteriorly displaced), portal vein, hepatic arteries & pancreas (left laterally displaced), IVC (posteriorly displaced) and adjacent bowel loops including duodenum. The lesion is also abutting right kidney.





Investigation of choice MRCP having similar findings Suggestive of Type 1c Chodedochal cyst. Laparotomy with upper right transverse incision was performed and a large fusiform cystic swelling involving the common bile duct and extending into the common hepatic duct up to a level above the opening of cystic duct was observed. The gallbladder, cystic duct, and liver appeared normal.

The gallbladder bed was dissected and freed after ligation of cystic vessels to assist dissection and cholecystectomy done then freeing the cyst from portal vein and hepatic artery. The cystic swelling was dissected from porta hepatis down to retroduodenal part of the bile duct. The cystic bile duct was ligated proximal to the junction with the main pancreatic duct, excised and reflected up toward the porta hepatis. The common hepatic duct, Common bile duct and cystic dilation of CBD was excised. The jejunum 45cm below the ligament of Trietz was transected by linear stapler. The closed - end distal segment of the jejunum was lifted to porta hepatis by creating window in retrocolic mesentry and sutured with the ostium of the remaining part of the common hepatic duct (hepaticojejunostomy) by end - to - side interrupted full suture using PDS 4/0.

The ostium of the proximal cut segment of the jejunum was sutured end - to - side with the distal segment of the jejunum (Roux - en - Y procedure) using linear stapler of 60mm (Fig. 3). Feeding jejunostomy was done 20 cm distal to - end - to side jejuno - jejunostomy.

Two drain was kept one in pelvis and second in gallbladder bed. Then layered closer of abdominal incision was done. The excised specimen was sent for histopathology. The histopathologic examination of the excised tissue confirmed the diagnosis of a benign choledochal cyst, involving common bile and hepatic ducts with normal gallbladder tissue

Postoperatively, the patient recovered unremarkably; the pain and jaundice disappeared and he was discharged on the seventh postoperative day After drain removal.

3. Conclusions

Choledochal cysts have been classified according to the system published by Todani et al into five major classes:

1) Type I cysts are the most common and represent about 80–90 %. They consist of saccular or fusiform dilatations of the common bile duct, which involve either a segment of the duct or the entire duct. This type is further subdivided into the following:
   Type IA is saccular in shape and involves either the entire common bile duct or the majority of it.
   Type IB is saccular and involves a limited segment of the bile duct.
   Type IC is more fusiform in shape and involves most or all of the bile and common hepatic ducts.
2) Type II choledochal cysts appear as an isolated diverticulum protruding from the wall of the common bile duct with or without involvement of the common hepatic duct.
3) Type III choledochal cysts arise from the intraduodenal portion of the common bile duct and are alternately termed “choledochocele”.
4) Type IV cysts are multiple saccular dilatations of either intrahepatic or extrahepatic bile duct, or both. They are subdivided into the following:
   - Type IVA cysts consist of multiple dilatations of the intrahepatic and extrahepatic bile ducts.
   - Type IVB cysts consist of choledochal cysts which are multiple dilatations involving only the extrahepatic bile ducts.

5) Type V or Caroli disease consists of multiple dilatations limited to intrahepatic bile ducts.

Several surgical procedures have been employed in the treatment of choledochal cysts. These procedures vary between laparotomy and laparoscopic approaches; however complete cyst resection, assisted Roux - en - Y reconstruction, and hepaticojejunostomy remain the procedure of choice by majority of surgeons.

In conclusion, we aimed to resect extrahepatic biliary ducts as much as possible preserving the last segment of the bile duct joining the main pancreatic duct. The procedure applied reduces the risk of subsequent malignant changes in the remaining stump. Others have advocated a procedure leaving a longer stump of common hepatic duct with mucosal resection as an alternative measure of protection against cancerous changes

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Notes
A written informed consent was obtained from the patient for publication of this case report and accompanying images.

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