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Review Studty of 30 Cases of Choledocalcyst in Adults: (A Rare Presentation)

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Abstract:
Choledochal cyst is the congenital abnormality that almost invariably requires surgical intervention to prevent hepaticobiliary & pancreatic complications. Although majority of these patients present in infancy & childhood, about 20 – 30% are diagnosed in adults. This study was both retrospective & prospective in 30 patients from Jan, 2011 to Feb. 2014 admitted in the Department of General Surgery. The study aimed at incidence of choledochal cyst in relation to age group and sex, common clinical presentation, various types of surgical treatment for various types of choledochal cyst and morbidity & mortality pattern of choledochal cyst.
Key Words: *Choledochal cyst, CBD, APBDJ.*

I. Introduction

Choledochal cyst is defined as isolated or combined congenital dilatation of the extra hepatic or intrahepatic biliary tree. The condition typically presents in infancy & childhood with male to female ratio 3 or 4. (1). More than 2/3 of the all reported cases have originated in Asia. Most common types of choledochal cysts are confined to extra hepatic biliary tree, communicating just below the bifurcation of right & left hepatic duct & extending into or near the pancreatic parenchyma (2, 3).
They are classified into five types (4).

1. **Dilatation of extra hepatic biliary tree.**
    a. Cystic
    b. Focal
    c. Fusiform
2. Saccular diverticulum of extrahepatic bile duct.
3. Biliary tree dilation within duodenum;- choledochocele
4. Intrahepatic & extrahepatic cysts
5. Intrahepatic bile duct cyst (single or multiple)

Most feared long term complication of Choledochal cyst is malignancy (5). Cancer of GB appears to be common in patients with biliary cyst. Adeno carcinoma is the most common type. Primarily treatment of Choledochal cyst is surgical [(6-7)] Medical therapy was associated with a 97% mortality rate. This paper is on choledochal cyst other than in children i.e. >14 years of age.

Patients of Choledochal cysts are likely to present with symptoms mimicking biliary colic, acute cholecystitis, pancreatitis or cholangitis or signs like jaundice, palpable mass[7-9] as a rule, and jaundice in adult form is intermittent and usually associated with vague pain in right hypochondrium and occasionally back pain. Diagnosis of choledochal cysts requires high index of suspicion. The most common presenting sign of choledochal cyst is jaundice. Main laboratory findings are conjugated hyperbilirubinemia and increased level of serum alkaline phosphatase[10-11] USG is best screening method for type I, II, IV, and V cysts[12]. Abdominal CT is highly accurate and offers a great deal of information that is helpful not only in confirming the diagnosis but also in planning surgical approaches. CT scans of choledochal cyst demonstrate involvement of extrahepatic or intrahepatic biliary tree or both, relation to adjacent structures and extent of cyst. Direct cholangiography (ERCP) is the preferred diagnostic modality for accurate definition of the type of choledochal cyst. Indeed, cyst classification is based upon the cholangiographic features. MRI/MRCP provides information equivalent to that provided with ERCP, without the associated complications of ERCP[13-15]

Definitive treatment of choledochal cyst is surgical. The aims of pre-operative management are complete cholangiographic definition of the extent of the cystic process and associated ductal pathology and control of biliary infection. In general all the bile duct cysts should be excised and bile flow re-established by mucosa to mucosa bilio-enteric anastomosis[15.] The surgical management of bile duct cysts is based upon cyst

type and associated hepatobiliary pathology. External drainage has no definitive role in the surgical management of choledochal cyst.

II. Material And Method

The present study is a prospective study carried out in 30 patients admitted in Department of General Surgery from 2011 to Feb. 2014. Hospital records pertaining to Choledochal cysts from the year 2010 were also taken into account. Clinical data was derived from the departmental computer record room and OT record register. Data regarding condition of patient at the time of admission, age, sex, previous operation, clinical features, pre-op investigations, per op findings and procedure done were recorded in the pre and post operative course of patients; all complications and response to treatment were also recorded.

III. Results

A total no. of 30 consecutive cases presenting to Department of Surgery between 2011 to 2014 have been studied. The distribution among the types in our series (As per Todani`s classification) was- type I 90%, one case (4%) each of III, IV and V and no case of type II has been reported. Most of the patients i.e. 60% belong to age between 10-20yr., age group 21-30 yrs and 31-40 yrs had 17% patients each and only 7% cases were in age group 41-60yrs. Female to male ratio being1.9:1. Abdominal pain was the most common presenting complaint (93% cases). Fever was seen in 56% cases, jaundice in 46%, vomiting in 40% and a palpable mass in 17% cases[16,] and were other presenting complaints. In our study diagnostic accuracy of USG was 90% and CT scan, ERCP and MRCP had an accuracy of 100%. Complete excision with Roux-en-y hepaticojejunostomy and cholecystectomy was done in 80% of cases, a demanding procedure Lilley`s technique in 7% cases, simple T-tube drainage in 3% cases, endoscopic sphincterotomy in 3% cases. Left hepatic lobectomy in 3% cases and 3% cases were inoperable. Post-operative complications were of minimal morbidity, which occurred in the form of wound infection (6%), recurrent cholangitis (3%), anastomotic leak (3%), DIC (3%) and mortality in 3% cases. Mortality was seen in 3% cases and it was due to poor general condition of patient.

IV. Discussion

Choledochal cysts are an uncommon anomaly of the biliary tract, but nonetheless is a significant source of morbidity. Choledochal cysts present more commonly in infancy and childhood, although the condition may be diagnosed first time in adulthood.

In our study, maximum number of patients (60%) was in age group 14-20yrs and remaining 40% were in age group 21-40yrs.

Choledochal cysts commonly present in patients who are younger than 10yrs (1).In our study male to female ratio is 1:1.9. Commonly Choledochal cysts presents as triad of right upper quadrant mass, abdominal pain and jaundice 7_9. Other symptoms are fever, vomiting, weight loss and complications like cholangitis, pancreatitis, gall stones and malignancy.

In our series only five patients had classical triad of symptoms. Majority of patients presented with pain abdomen followed by fever, Jaundice and vomiting. Two patients presented as rupture of Choledochal cyst which is very rare.

Choledochal cysts are of four types. In our series most common type of Choledochal cyst is type I.4 Diagnosis mainly depends on investigations, as the clinical symptom are non specific.

Diagnosis of biliary cyst requires a high index of suspicion. Ultrasonography had diagnostic accuracy of 90% while ERCP had 100% diagnostic accuracy 12-15.

CT scanning is useful for defining the extent of cyst; recently CT Cholangiography has been used in diagnosis of Choledochal cysts. Now a days the use of MRCP is increasing although accuracy is more over similar, but MRCP is non invasive .16-17

The surgical management of bile duct cysts in adults is based upon cyst type and the presence of associated hepato billiary pathology. The aims of preoperative management are complete cholangiographic definition of the extent of the cystic process and associated ductal pathology.

The treatment of choice for type I Choledochal cysts in adults is total cystectomy with Roux-en-y Hepaticojejunostomy, for type II is cyst excision with t-tube drainage or Hepaticojejunostomy, for type III i.e. choledochocele is endoscopic Sphincterotomy, for type IV is excision of extra hepatic cyst and Roux-en-y

Hepaticojejunostomy and for type V is liver resection or liver transplantation (15)

Cholecystectomy was performed in all patient of Choledochal cyst.

In our series post operative complications are bile leak in one patient, cholangitis in one patient and wound infection in two patients.

Average hospital stay was 10-14 days. One patient died because of poor general condition.

The most important point in Choledochal cysts is diagnosis which needs high index of suspicion.

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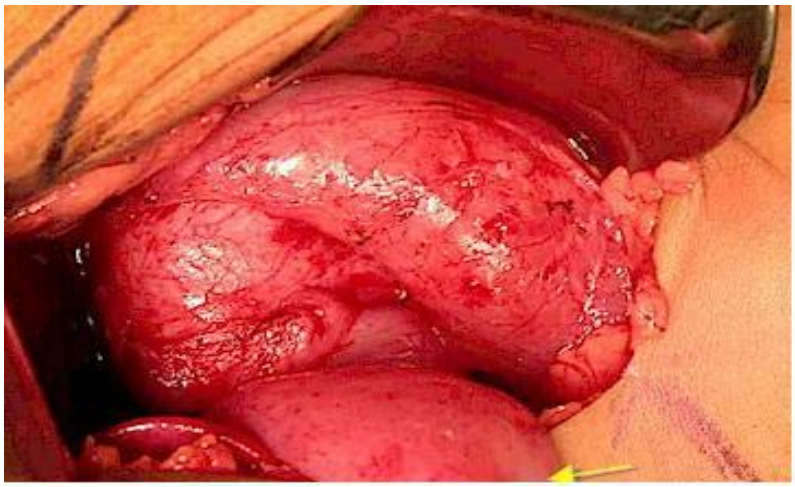
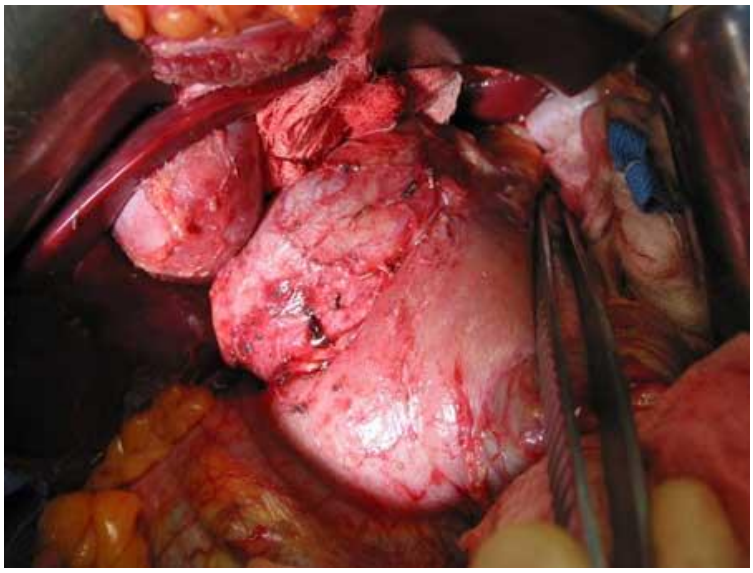


Figure 1 Intra op picture of Choledochal Cyst



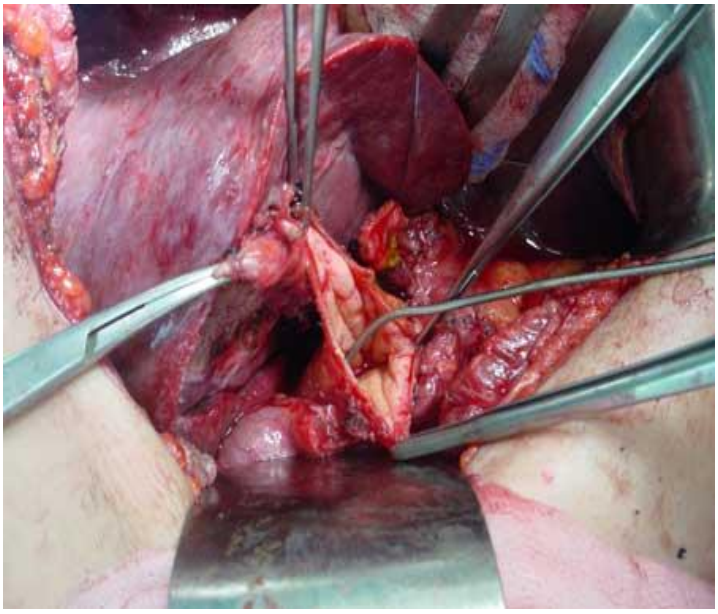


FIGURE: - 3
Per operative photographs of CHOLEDOCAL CYST