



## Management of Benign Bile Duct Conditions in Our Institute

### KEYWORDS

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### ABSTRACT

**Background:** Benign bile duct pathologies include Common bile duct stones, stricture, choledocal cysts, biliary atresia, Cholangitis resulting in obstructive jaundice. Surgeons in their practice often come across one of these pathologies. ERCP (Endoscopic retrograde cholangio-pancreaticography) might not be available at rural setup like ours and it is costly procedure. We present a general review of benign bile condition at our institute.

**Material and Methods:** Total 15 patients who presented with obstructive jaundice at our hospital were included in study and consents were obtained for inclusion as well as for surgical procedure.

**Conclusion:** Combined Choledochoduodenostomy (CDD) and T-tube drainage is best method for treatment of various benign biliary tract conditions in a setup where ERCP is not available.

### Introduction:

Benign bile duct pathologies include Common bile duct stones, stricture, choledocal cysts, biliary atresia, Cholangitis resulting in obstructive jaundice. Surgeons in their practice often come across one of these pathologies. Cholangitis which usually leads to bile duct stricture or idiopathic bile duct stricture is rare condition requiring patient admission and either medical or surgical management<sup>1</sup>. Surgical management includes decompression of the biliary tract by ERCP and stenting<sup>1,2,3</sup>. Bile Duct stone /choledocholithiasis is common condition encountered by surgeons which require surgery. Choledocal cyst presents with features of obstructive Jaundice.

### Material and method:

All the patients presenting with signs and symptoms of obstructive jaundice to the surgical OPD at Dhiraj hospital were screened for biliary tract disease by USG (Ultrasonography) and patients with benign biliary tract disease were included in our study. Routine investigations were done in all patients for preoperative work up including complete blood count, liver function tests, renal function, bleeding profile. USG would give us size of CBD and Number of stones, cyst and stricture if present. CT scan or MRCP was done to know exact anatomical delineation of Biliary Tract in few cases. Those patients with choledocal cyst, biliary stricture and with common bile duct Size more than 15 mm, with multiple stones, biliary sludge or stone impacted in the lower CBD were treated by choledochoduodenostomy. Open cholecystectomy was done followed by longitudinal incision of 2.5 – 3 cm length over CBD and similar length transverse incision over duodenum. Kher's T tube was inserted in to CBD and duodenum and suturing of end of incision of CBD with midpoint of incision over duodenum and vice-versa was done with 3-0 PDS suture to achieve diamond configuration. Later T-tube was taken out vertically through separate incision.

Drain was kept and patients were kept nil- by-mouth for 5 days and on 12<sup>th</sup> day T-tube cholangiogram was done for finding any leakage and tract. If cholangiogram was normal T-tube was blocked for 48 hrs and patients were monitored for features like fever, jaundice or increase in drain. If patients does not develop any complications T-tube was removed and 24 hrs later drain was removed. If patient develops any complication following blockage of T-tube, it was kept for 5 more days and similar procedure was performed.

### Results:

Total 15 patients of benign biliary tract condition were included in our study with age ranging from 35 years to 60years, with a mean age of 47.5 years. There was a female predominance in our study with males accounting for 33.33% of patients.

**Table 1: AGE-SEX DISTRIBUTION:**

SEX	Male	Female
<30	0	0
30-50	4	7
>50	2	2

FIGURE 1: GRAPH SHOWING AGE- SEX DISTRIBUTION:

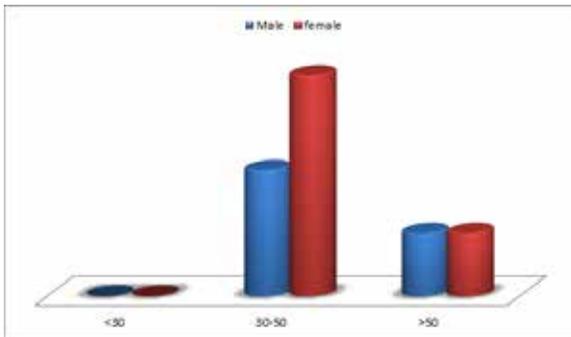
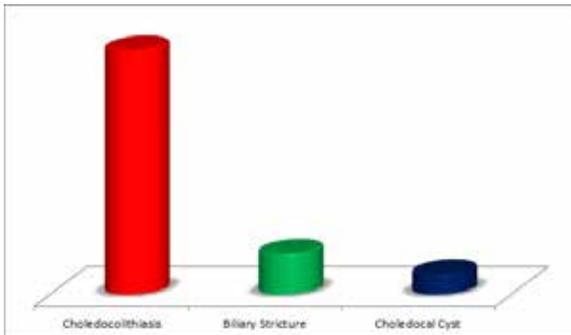


FIGURE 2: GRAPH SHOWING VARIOUS DISEASES IN OUR STUDY:



There were 12 patients diagnosed of having choledocholithiasis, 2 with biliary stricture and one with choledochal cyst. Patients with Biliary stricture due to cholangitis were treated by antibiotics and later after 6 weeks they were operated.

All the patients presented with features of obstructive jaundice. All the patients were admitted for 15 days except 1 patient who was discharged on post of day 22. In 1 patient was having fever and abdominal pain after blocking T-tube so it was removed on post operative day 21.

10 patients were asymptomatic during the follow up while two of other was having features of mild epigastric pain, gastritis, nausea, vomiting who were managed conservatively with Proton pump inhibitors. Patients were followed for at least 2 months and none were having complications like cholangitis, recurrence.

#### Discussion:

The first successful CDD was performed by Sprengel in 1913<sup>5</sup> and since then it has become safest method to treat CBD stone. We performed CDD with T tube in 15 patients of various biliary conditions like CBD stone, biliary stricture, Choledochal cyst.



100 successful cases were reported in 1928 by Florcken and he described about the size and adequate stroma for CDD and concluded that "more the barium the better" in barium study of the biliary tract<sup>6</sup>. Most common indications for CDD as concluded in our and other studies<sup>7, 8</sup>, are dilated CBD (>15mm) with stones and multiple CBD stones. There is no evidence of recurrence of symptoms or recurrent stone in our as well as other studies<sup>9</sup>. There was no biliary leakage in our study while other study<sup>10</sup> was having 10% leakage following anatomises.

#### Conclusion:

Combined Choledochoduodenostomy (CDD) and T-tube drainage is best method for treatment of various benign biliary tract conditions in a setup where ERCP is not available.

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