

# “BILIARY CALCULI WITHOUT SURGICAL JAUNDICE”

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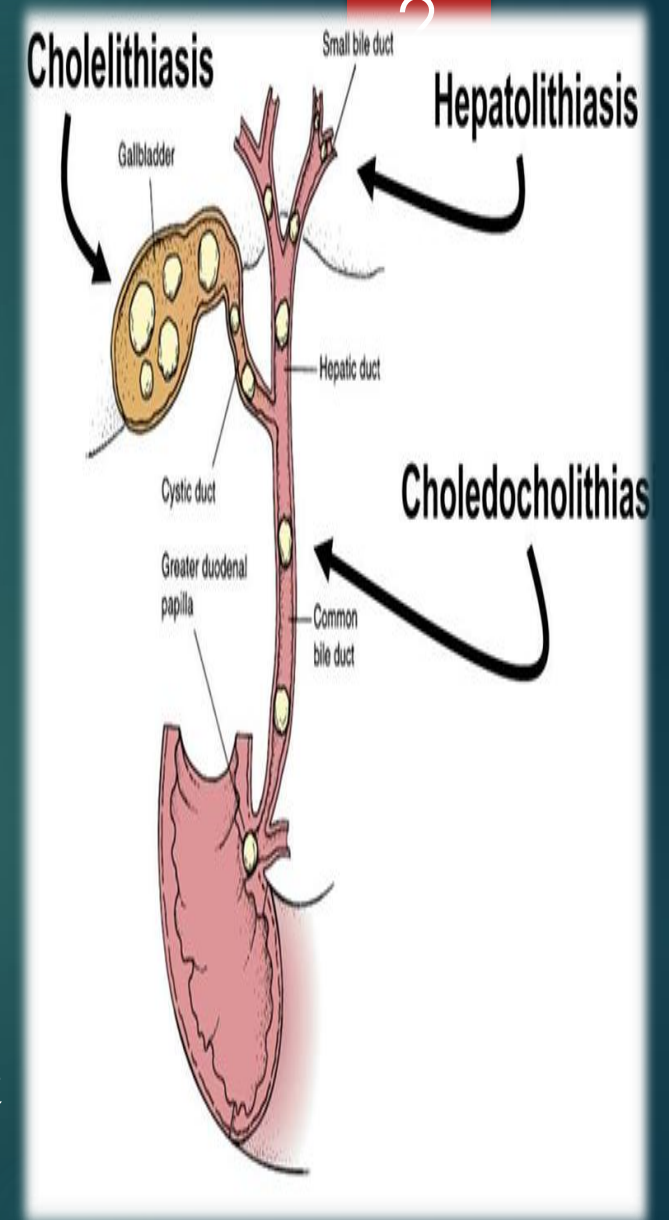
UNIT 2

DEPARTMENT OF GENERAL SURGERY

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# INTRODUCTION

- ▶ Jaundice is the most common presenting symptom of biliary ductal obstruction. (Conjugated Hyperbilirubinemia)
- ▶ In recent years widespread use of high resolutions imaging techniques to investigate the causes of abdominal symptoms has resulted in increased reporting of bile duct (BD) dilatation in symptomatic as well as asymptomatic patients.
- ▶ In this case, we aimed to report multiple studded biliary calculi involving entire extrahepatic biliary passage surprisingly without jaundice



# A CASE REPORT

- 71yr/F, with no known co-morbidities with C/o
  - Pain in right upper abdomen since 10 days
  - A/W Multiple episodes of vomiting since 10 days
- No history of jaundice/ fever
- No history of similar episodes in the past
- On General Physical Examination:
  - Vitals stable
  - *No Icterus*



↳ **Per Abdominal Examination –**

↳ Soft, Non–distended,

↳ Tenderness noted at Right Hypochondriac Region and Epigastric region,

↳ No palpable lump,

↳ Bowel sounds were present in all 4 quadrants.

↳ **Systemic examinations** – Within Normal limits

# INVESTIGATIONS

↳ All blood investigations were within normal limits

↳ **LFT**

↳ T. Bilirubin: 0.86 gm/dl

↳ D. Bilirubin: 0.39 gm/dl

↳ **ALP: 615 IU/L**

- **USG –Abdo** – Distended Gallbladder shows echogenic sludge within, Few echo reflective calculi of 5-6mm were noted in the neck of the gallbladder, and no pericholecystic collection.

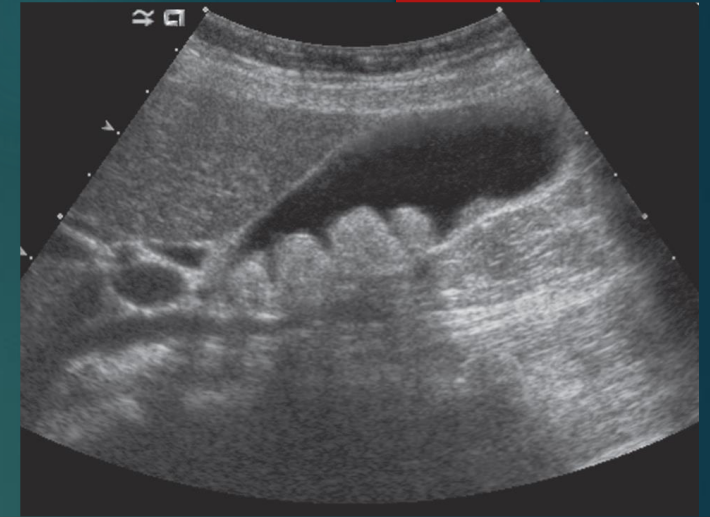
**Proximal CBD was not dilated, and Distal CBD could not be visualized.**

- **CECT-ABDOMEN** –

- Moderate to severe dilatation of intra and extra-hepatic biliary radicals.

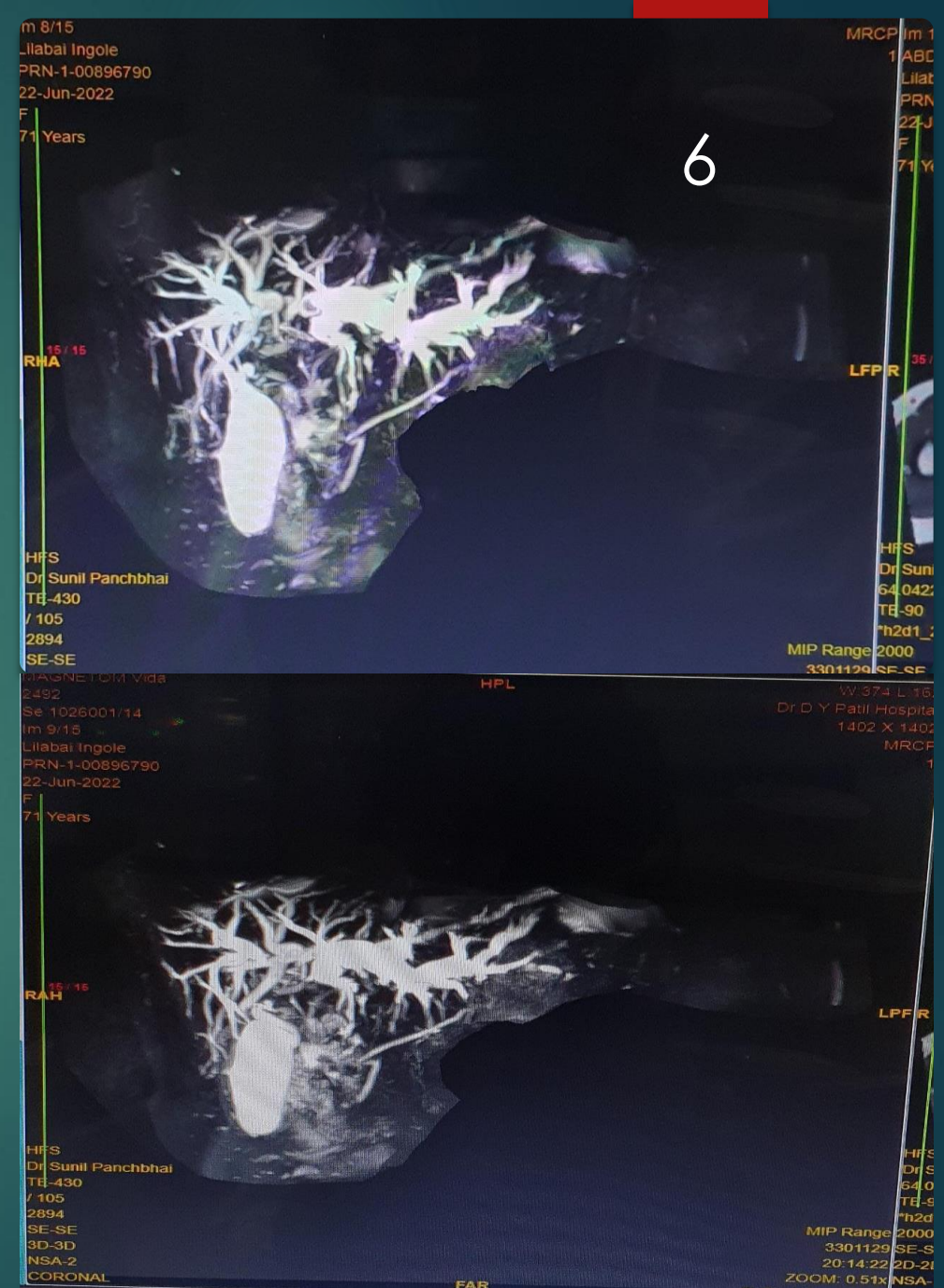
- Severely dilated CBD, CHD with its right and left branches due to multiple rounded hyperdense calculi

s/o- Severe Choledocholithiasis with cholelithiasis



# MRCP

- The right hepatic duct (18mm),
- The left hepatic duct (17 mm),
- The common hepatic duct (35mm),
- The common bile duct (27 mm) appears dilated.
- Multiple large filling defects are noted in the common bile duct, and common hepatic duct extending into the bilateral hepatic duct, the largest of size measuring approximately 3.5 X 2.5 cm, in the common bile duct.
- Mild to moderate dilatation of intrahepatic biliary radicals,
- gall bladder is well distended showing few filling defects (2-3mm).

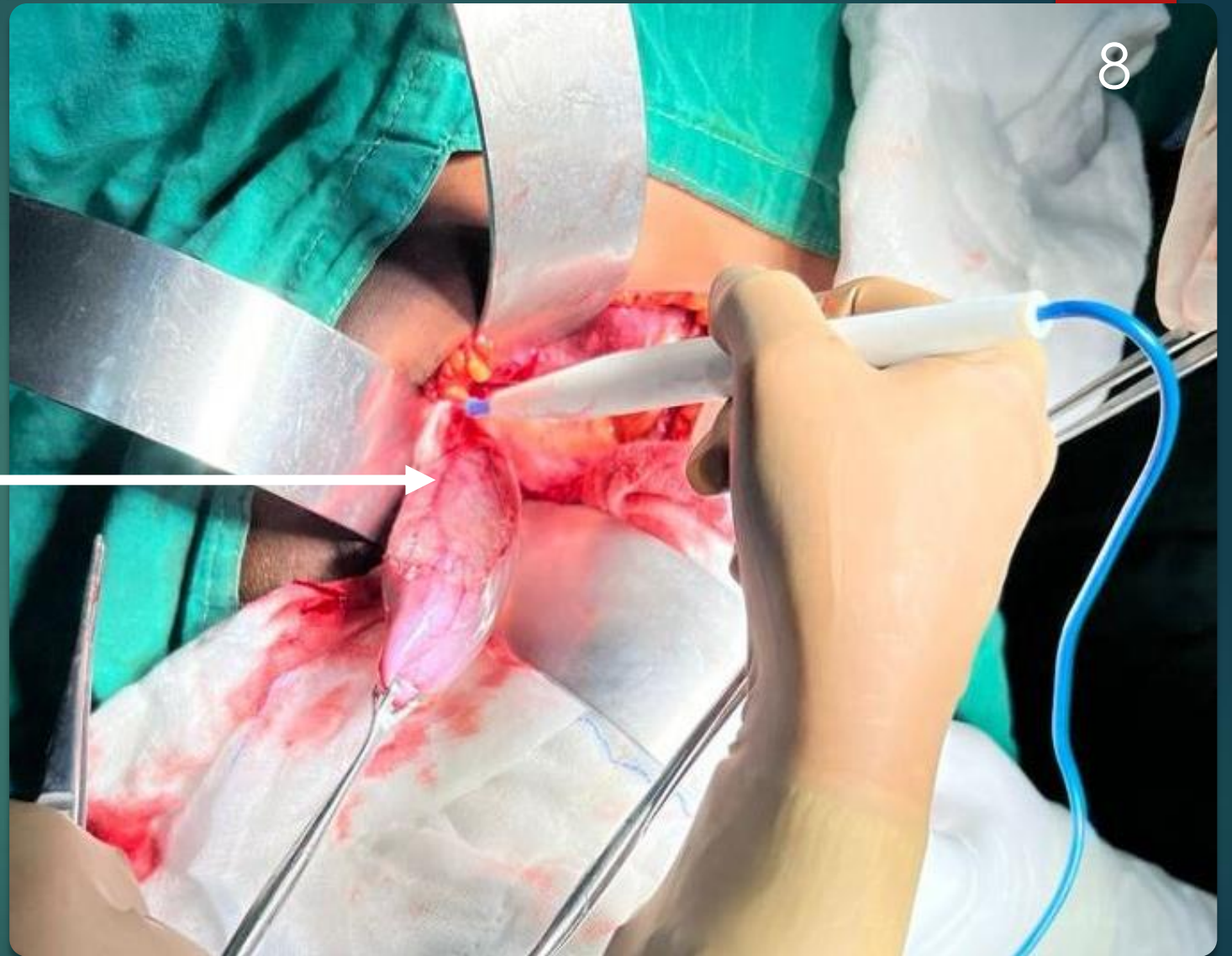


# COURSE IN HOSPITAL

- ▶ Medical Gastro opinion- Surgical intervention i/v/o multiple studded large biliary calculi.
- ▶ Pre Anaesthetic fitness was taken.
- ▶ With due consent & pre-op optimization, the patient posted for *Cholecystectomy with CBD exploration.*
- ▶ Incision - Right Sub costal.

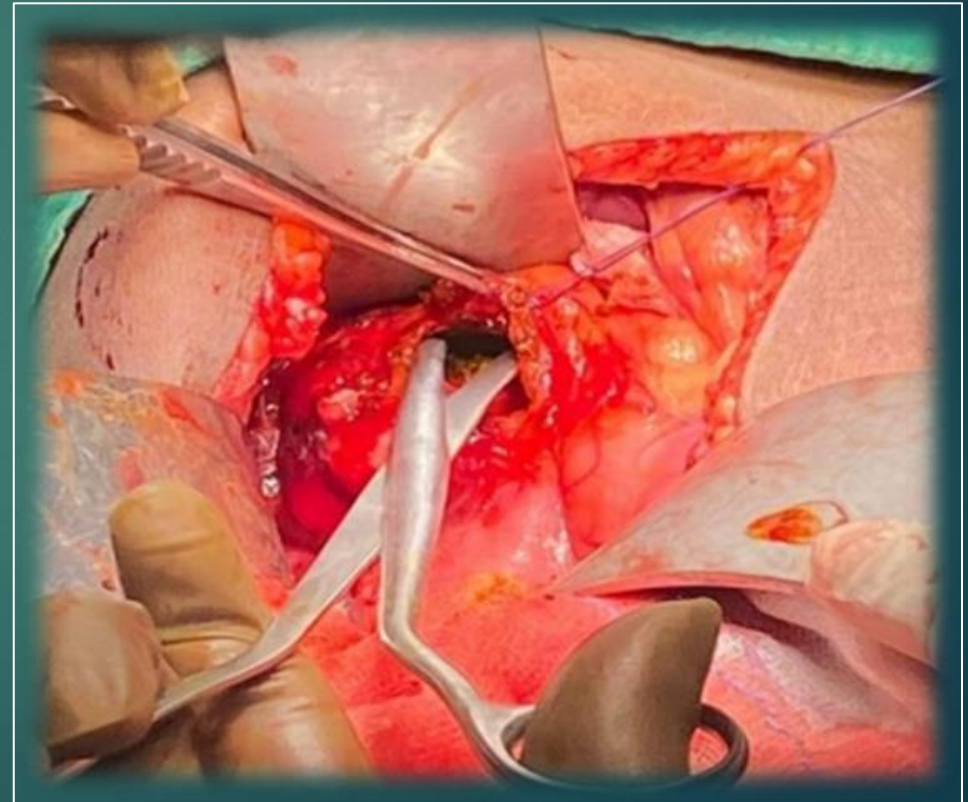
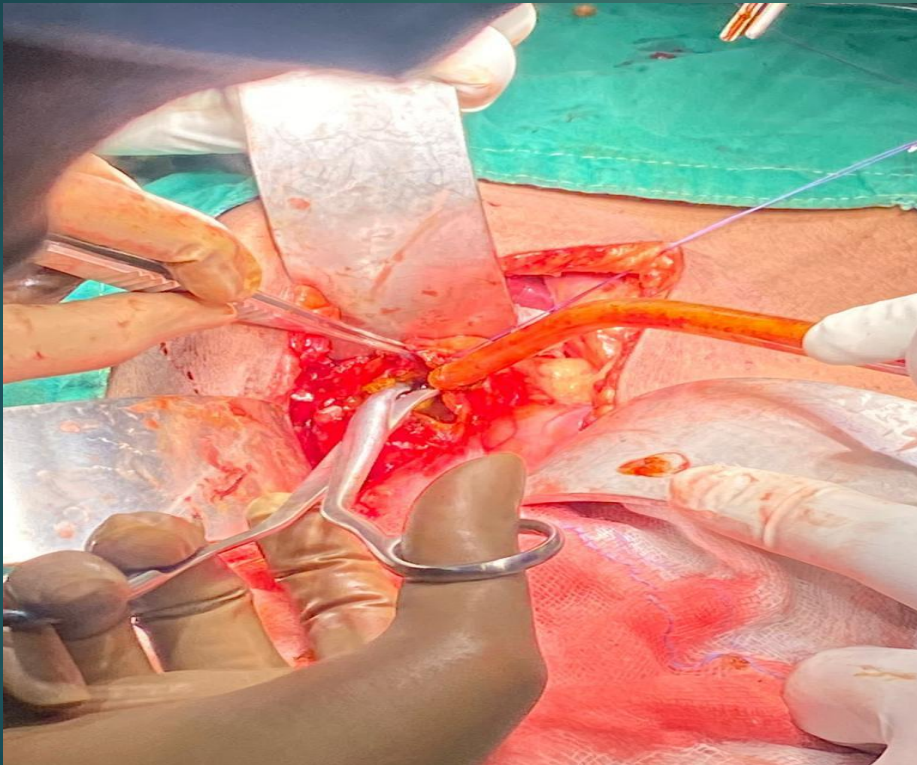
# INTRA-OP IMAGES

Distended **gall bladder** with multiple palpable stones in it.

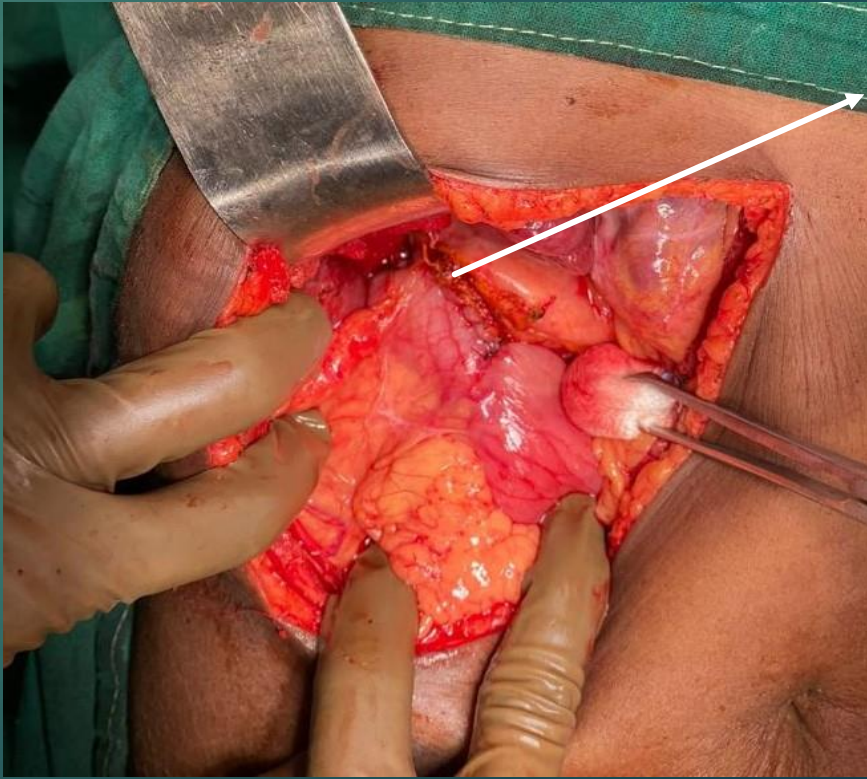
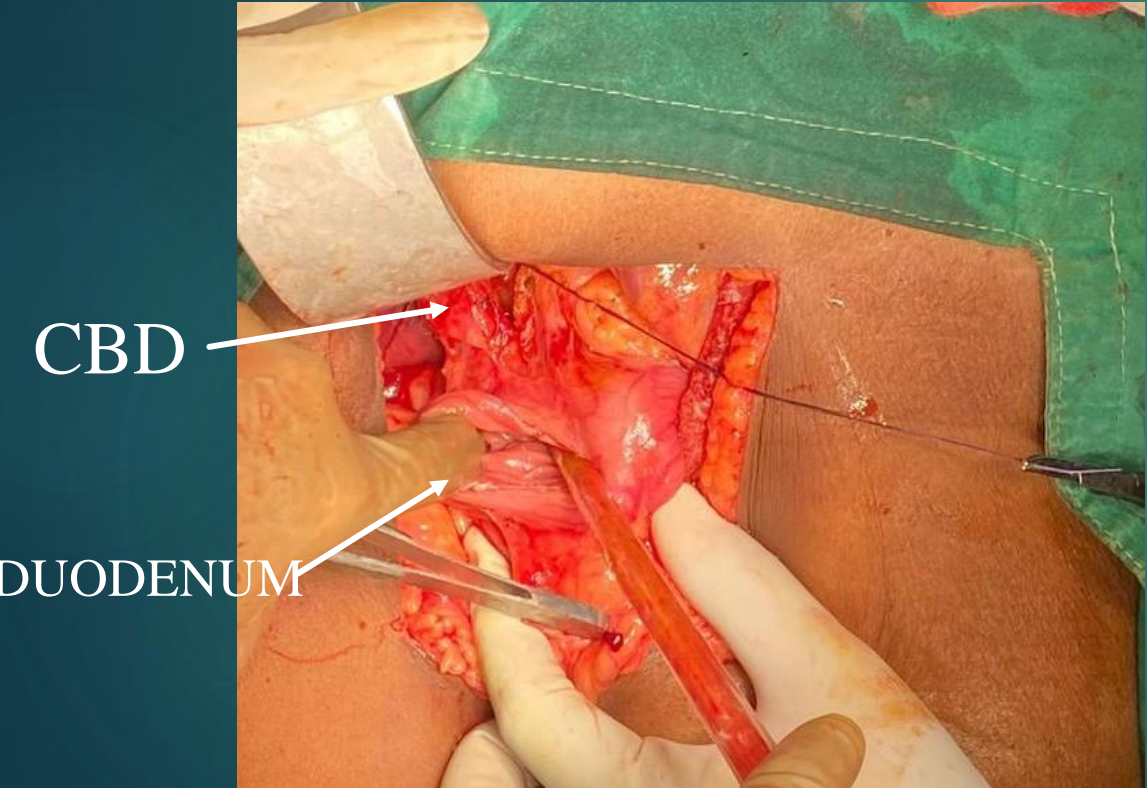




Multiple irregular brownish pigmented calculi were found extending to the origin of the hepatic duct, calculi extracted throughout the biliary passage, and drainage confirmed.



# BILIO-ENTERIC ANASTOMOSIS





Retrieved multifaceted mixed pigmented biliary calculi of different sizes with gallbladder

# Follow Up

- ▶ Post-op recovery was uneventful.
- ▶ Patient was discharged on 7<sup>th</sup> post-operative day.
- ▶ Patient Was following up every 3-4 months.

# CHOLEDOCHOLITHIASIS

- ▶ Stone in the common bile duct
- ▶ 10-18% of patients have associated stones in the gallbladder
- ▶ Incidence increases with age.
- ▶ 12% of CBD stones are clinically silent and 6% do not exhibit abnormalities in liver function tests (LFTs) or in the diameter of the CBD- **SILENT CBD STONES**

# TYPES OF STONE

## ▶ **PRIMARY CBD STONE**

Associated with Biliary Stasis and infection  
Brown Pigmented.

## ▶ **SECONDARY CBD STONE**

Stone migrates from the gallbladder  
Cholesterol stones in 75%  
Black pigmented stones in 25%

# CLINICAL PRESENTATION

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- ▶ Jaundice ++
- ▶ White coloured stools
- ▶ Dark urine
- ▶ Scratch marks in the body
- ▶ Yellowish discolouration of sclera, nail bed
- ▶ Tender right upper quadrant,
- ▶ Palpable gall bladder +/-
- ▶ **Charcot's triad of cholangitis-** Right upper quadrant pain, jaundice, and fever.

# INVESTIGATION

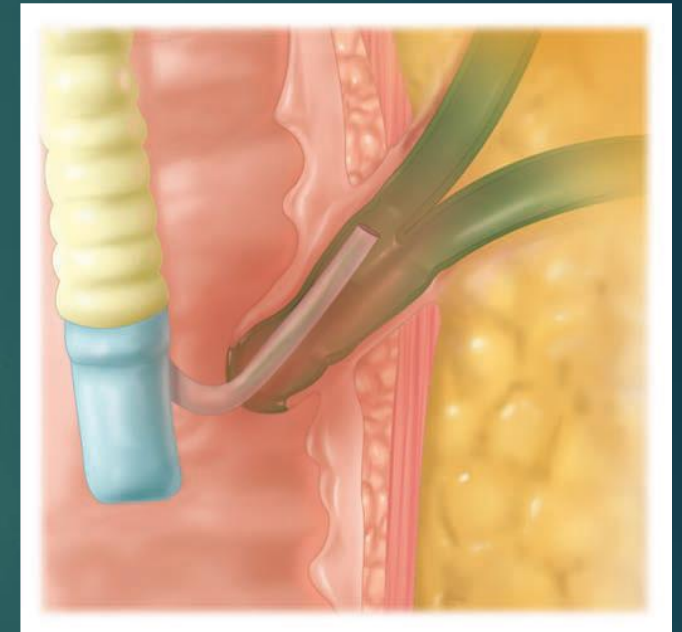
- Elevation of serum bilirubin, alkaline phosphatase, and transaminases are commonly seen in patients with bile duct stones.
- Ultrasonography
- Magnetic resonance cholangiography (MRC)



# ENDOSCOPIC RETROGRADE CHOLANGIOPANCREATOGRAPHY (ERCP):

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- Is the gold standard therapeutic 1<sup>st</sup> line management in common bile duct stones.
- **Failure of ERCP to extract stones:**
  - impacted large (>15 mm)
  - multiple (>3), intrahepatic/extrahepatic duct/cystic duct stones
  - difficult stones (i.e Mirrizi's syndrome, stricture of the lower CBD).



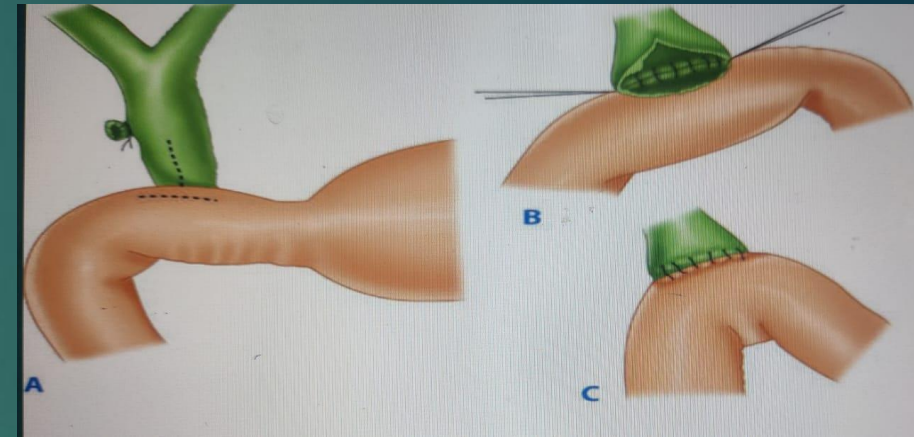
# DEFINITIVE MANAGEMENT

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- ▶ Laparoscopic / Open common bile duct exploration is an option if the endoscopic method has already been tried or not feasible.
- ▶ If a choledochotomy is performed, a T tube is left in place.
- ▶ **Primary closure-** of the CBD after exploration can be done only if certain criteria such as the following are satisfied:
  - Patent ampulla of Vater
  - Complete removal of all intraductal calculi
  - Absence of pancreatic pathology
  - Meticulous suture of the duct

# INDICATION OF CHOLEDOCHODUODENOSTOMY

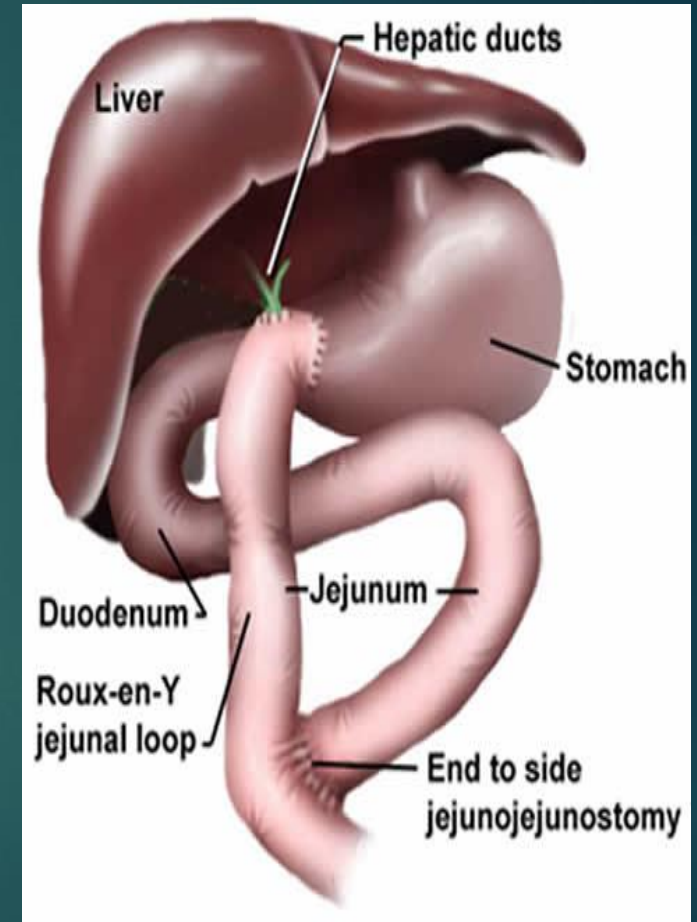
- Dilated common duct > 15mm with stones
- Multiple common bile duct stones
- Intra hepatic calculi
- Primary common bile duct stones
- Residual / Recurrent stones
- Stone impacted in the ampulla of Vater
- Side to side CDD is an easy, effective and definitive method of decompression, especially when there are multiple stones in a dilated CBD



# INDICATION OF HEPATOJEJUNOSTOMY

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- Biliary fibrosis produced by chronic pancreatitis
- Penetrating trauma of the porta hepatis
- Previous Bilio-enteric operations with subsequent stricture formation
- Choledochal cyst resections
- Iatrogenic biliary trauma (gastrectomy, pancreatic and hepatic resections, portal decompressive procedures)



# CONCLUSION

- ↴ ABSENCE OF JAUNDICE DOES NOT RULE OUT BILIARY CALCULI
- ↴ MRCP PLAYS AN IMPORTANT ROLE IN THE DIAGNOSIS OF PATIENTS WITH COLICKY-TYPE ABDOMINAL PAIN.
- ↴ LIMITATIONS OF ERCP MUST BE KEPT IN MIND WHEN A PATIENT PRESENTS WITH SUCH A PICTURE AND EXPLORATION TECHNIQUES NEED TO BE PLANNED.


*“If you fail to plan, you are planning to fail!”*



THANK YOU

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