

Management of Common Bile Duct Stones

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Symptoms

- Jaundice, RUQ pain
- Fever, leukocytosis
- Complications: cholangitis, pancreatitis

Diagnosis

- CBD stone on ultrasound
- Enlarged CBD on ultrasound (>6-7mm)
- Elevated Tbil/AST/ALT/ALP
- Gallstone pancreatitis

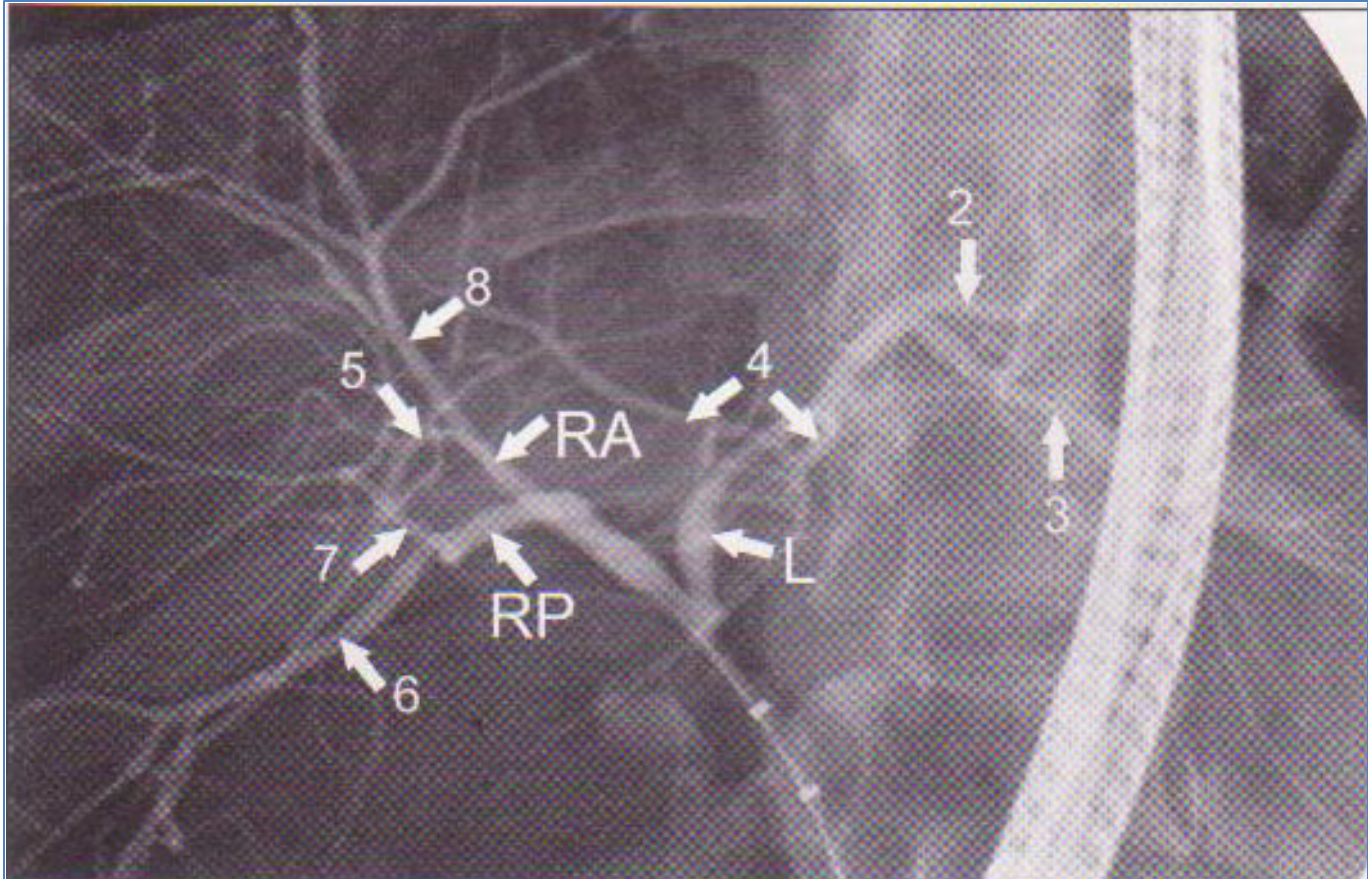
Options: 1. Pre-op ERCP
 2. Intraoperative cholangiogram

ERCP

- 80-90% ductal clearance rate
- 40% normal exam
- 5-15% morbidity

- Diagnostic and therapeutic
- MRCP: nontherapeutic, saves ERCP if negative

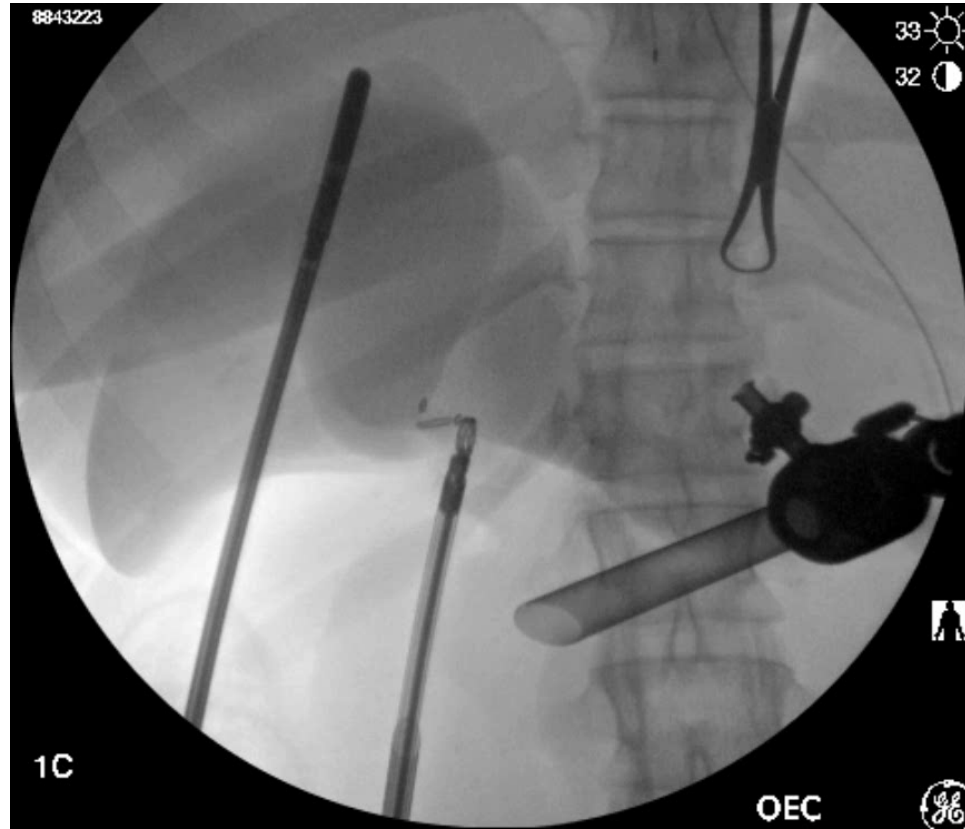




Intraoperative cholangiogram (IOC)

- Indications:
 - Suspect CBD stone
 - Unclear anatomy
- Interpretation:
 - Need to identify R and L hepatic ducts
 - Need to see contrast emptying into duodenum
 - Morphine – contract sphincter
 - Glucagon – relax sphincter
 - Look for stones

Common Scenario



Laparoscopic CBD Exploration

Transcystic

- CBD < 6mm, dilated cystic duct, small stone, stones in CBD (vs CHD)
- 1. Flush saline + glucagon
- 2. Fluoroscopic basket or balloon
- 3. Choledochoscope
- 4. Endoloop + clip or suture closure

Direct Choledochotomy

1. Clear anterior surface
2. 3 + 9 o'clock stay sutures
3. 10-20mm longitudinal ductotomy with scissors
4. Flush w/ 14Fr catheter
5. Same as #2 and 3 from transcystic
6. T tube closure 10 or 14Fr
 - Interrupted absorbable sutures

To conclude either approach:

- Completion cholangiogram
 - No leak of closure
 - Emptying into duodenum
 - No filling defects

ERC or LCBDE ?

- Rogers et al (Arch Surg 2010)
- RCT – 122 patients randomized to either ERC or LCBDE for CBD stones
- CBD clearance (primary endpoint)
 - ERC 98%, LCBDE 88% (p=0.28)
- Time from first procedure to discharge favored LCBDE (55 hours versus 98 hours)
- Professional fees lower for LCBDE (\$4,820 versus \$6,139)