Recurrent Choledocholithiasis Years After Cholecystectomy: Long-Term Biliary Risk

Hunter Horsley, OMS III, Bethany Russell, MD

DeBusk College of Osteopathic Medicine, Lincoln Memorial University, Harrogate, TN 37724
West Tennessee Healthcare, Henry County Hospital, Paris, TN 38242

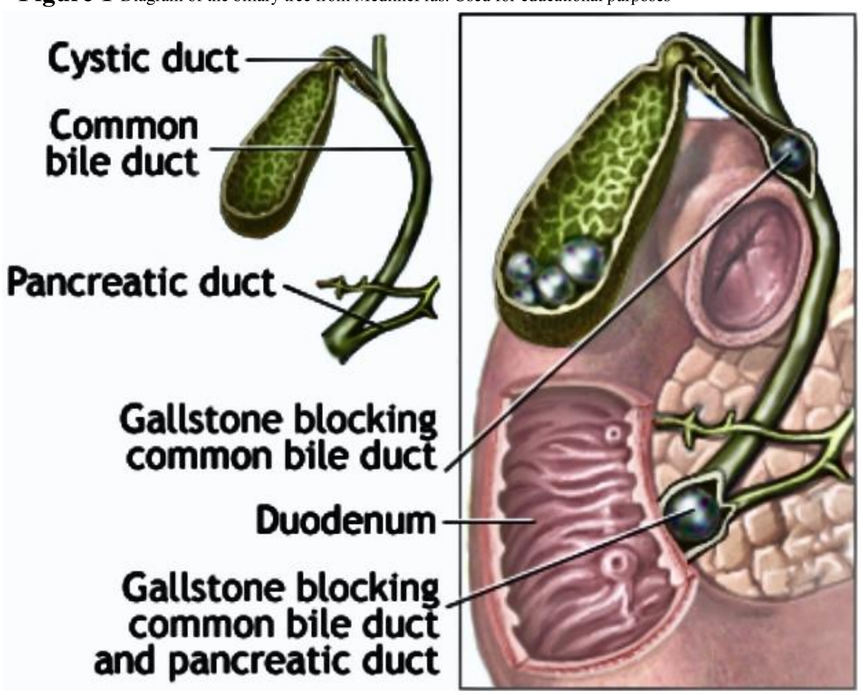
Introduction

The liver produces bile, a digestive fluid that travels through the biliary tree to be stored in the gallbladder or released into the small intestine to aid in fat digestion. Gallstones can form for several reasons including biliary stasis, chemical imbalance, or sludge formation. Although often benign, stones can obstruct biliary flow and lead to symptoms.

Acute cholecystitis occurs when a gallstone blocks the cystic duct. Similarly, choledocholithiasis refers to gallstones obstructing the common bile duct, a condition that accounts for up to 15% of gallstone-related disease. Obstruction of this duct can cause a backup of bile leading to jaundice, pruritus, dark urine, and pale stools. If obstruction is accompanied by bacterial infection, it can progress to acute cholangitis, a potentially life-threatening condition.

Management of choledocholithiasis typically involves stone extraction with endoscopic retrograde cholangiopancreatography (ERCP) followed by cholecystectomy to prevent future gallbladder-derived stones. In rare cases, patients continue to experience choledocholithiasis after cholecystectomy due to retained cystic duct stones or true de novo bile duct stone formation. This case highlights a patient with recurrent choledocholithiasis decades after cholecystectomy requiring multiple ERCPs and stent placements over several years.

Figure 1 Diagram of the biliary tree from MedlinePlus. Used for educational purposes



Case Description

HPI: 69-year-old male presents to the outpatient clinic with severe epigastric pain for the past 6 months. The pain is severe, sharp and deep which can last anywhere from 10 minutes to 2 hours. The pain is commonly accompanied by symptoms of nausea and vomiting. Patient states that these symptoms are similar to past episodes of choledocholithiasis.

History:

- 1997 Cholecystectomy secondary to cholelithiasis
- 2016 severe epigastric pain found to be choledocholithiasis; treated with ERCP
- 2022 recurrence of severe epigastric pain found to be recurrent choledocholithiasis; treated with ERCP and stent placement for 6 weeks
- 2024 Presented to clinic with similar epigastric pain

Vitals:

- BP 130/98, HR 70, RR 16, T 97.8

Physical Exam:

- General Assessment: Healthy appearing, in no apparent distress
- Cardiovascular: S1 & S2 RRR without murmurs, rubs or gallops
- Respiratory: LCTAB without wheezing, stridor, or crackles. Good air movement
- Abdomen: Soft abdomen that is tender to palpation in the epigastric region

Labs:

WBC	AST	ALT	ALP	T. Bili
18.6	24	18	121	1.4

Osteopathic Pearls:

- Hypertonicity at T5-T9 reflecting viscerosomatic reflex from the gallbladder, biliary tree, and pancreas

Assessment & Plan:

- Calculus of bile duct with obstruction
    - Gastroenterology referral for repeat ERCP

Diagnosis & Treatment

Diagnosis:

- Recurrent choledocholithiasis post cholecystectomy

Treatment:

- Stone removal with ERCP and stent placement

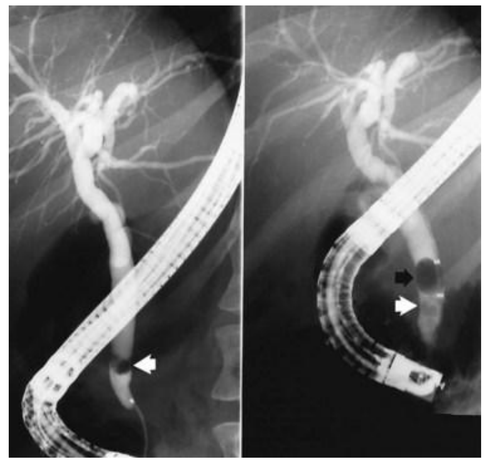


Figure 2 Diagram of biliary stone management. Adapted from: Puli SR, Carr-Locke DL. "Stones in the Bile Duct: Endoscopic and Percutaneous Approaches." Chapter accessed via ClinicalGate.com. Used for educational purposes. Indicated is a biliary stone (white arrow) and an extraction balloon (black arrow)

Discussion & Impact

Recurrent choledocholithiasis in a post-cholecystectomy patient is an uncommon but clinically important finding. Recurrent stones may arise from biliary stasis, ductal dilation, or true de novo stone formation. The long interval after cholecystectomy in this case supports a de novo etiology. Diagnosis is often delayed because symptoms are nonspecific and laboratory abnormalities may be subtle. In clinical practice a patient's past surgical history often guides the differential diagnoses, and a cholecystectomy can create a false sense of reassurance that biliary stones are unlikely. This case highlights the need to keep choledocholithiasis as a reasonable differential even years after gallbladder removal, particularly when patients present with biliary-type pain or cholestatic lab problems. Prompt recognition and intervention are crucial to reduce further complications such as cholangitis, pancreatitis, or progressive biliary injury.

References