AMSER Case of the Month July 2025

75-year-old female with upper abdominal pain

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Patient Presentation

HPI: 75-year-old female with history of cholecystectomy presents to ED with acute upper abdominal pain. She complains of severe gnawing upper abdominal pain after eating ice cream. Pain is 10/10 in intensity, non-radiating, with associated nausea and vomiting. Denies fever, chills, chest pain, or shortness of breath, constipation, diarrhea, or rash.

Past Medical History: Hypertension, Ectopic Pregnancy, Opioid Use Disorder

Past Surgical History: Cholecystectomy about 40 years ago

Medications: None

Social History: Current tobacco (1 pack per week) and heroin use (up to 7-8 'bags' per day)

Allergies: Penicillin (moderate, unknown reaction)

Physical Exam: Appears ill, in mild distress. Temp: 37.3 C HR: 90 BP: 139/70 SpO2: 93 RR: 16. Mild RUQ abdominal and epigastric tenderness, with no rebound/rigidity/guarding. Active bowel sounds.

Pertinent Labs

- WBC: 11.96
- ALT: 55
- AST: 33
- T Bili: 6.2
- Alk Phos: 211
- Lactic Acidosis AG = 15

Chemistry		
Na	mmol/L	137
K	mmol/L	3.5
Cl-	mmol/L	101
HCO3	mmol/L	↓ 21
Anion Gap	mmol/L	↑ 15
BUN	mg/dL	20
Cret	mg/dL	0.62
Estimated CrCl	mL/min	67.21
eGFR CK...	mL/min/1.73 m2	>90
Glu	mg/dL	109
Ca	mg/dL	8.5
Mg	mg/dL	2.2
Osmolality	mOsm/kg	--
Lactate (ven)	mmol/L	--

Liver/GI		
ALT	unit/L	↑ 55
T Bili	mg/dL	↑ 6.2
Alk Phos	unit/L	↑ 211
AST	unit/L	↑ 33
Lipase	unit/L	--
Amylase	unit/L	--
Nutrition		
Alb	g/dL	↓ 2.7
Prot	g/dL	↓ 5.9

CBC		
WBC	K/uL	↑ 11.96
Hgb	g/dL	13.4
Hct	%	37.6
RBC	M/uL	4.31
MCV	fL	87.2
MCHC	g/dL	35.6
MCH	pg	31.1
RDW	%	13.9
Plts	K/uL	↓ 79
Platelet Morphology		NORMAL
MPV	fL	11.0
Type of Diff:		MANUAL
Immature Gran%	%	0.9
Neut%	%	90.1
Lymph%	%	5.4
Mono%	%	3.6
Baso%	%	0.0
Eos%	%	0.0
Immat Gran, Abs	K/uL	0.11
Neut, Abs	K/uL	↑ 10.78
Lymph, Abs	K/uL	↓ 0.65
Mono, Abs	K/uL	0.43
Baso, Abs	K/uL	0.00
Eos, Abs	K/uL	0.00
RBC Morphology		NORMAL

What is the appropriate imaging?

ACR Appropriateness Criteria

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Variant 4: **Right upper quadrant pain. Fever, elevated WBC count. Suspected biliary disease. Negative or equivocal ultrasound. Next imaging study.**

Procedure	Appropriateness Category	Relative Radiation Level
MRI abdomen without and with IV contrast with MRCP	Usually Appropriate	O
CT abdomen with IV contrast	Usually Appropriate	☢☢☢
Nuclear medicine scan gallbladder	Usually Appropriate	☢☢
MRI abdomen without IV contrast with MRCP	May Be Appropriate	O
CT abdomen without IV contrast	May Be Appropriate	☢☢☢
CT abdomen without and with IV contrast	Usually Not Appropriate	☢☢☢☢

This imaging modality was ordered by the ER physician

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Findings: (unlabeled)

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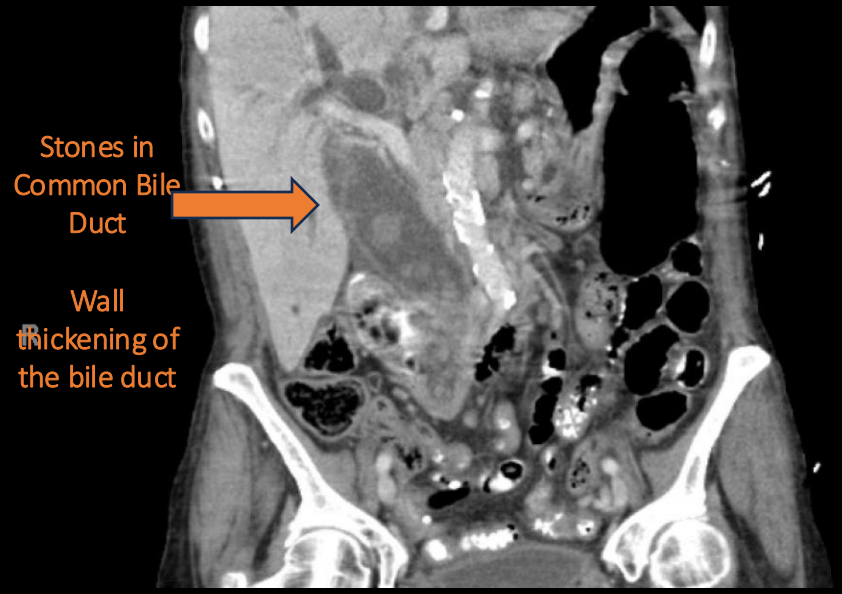
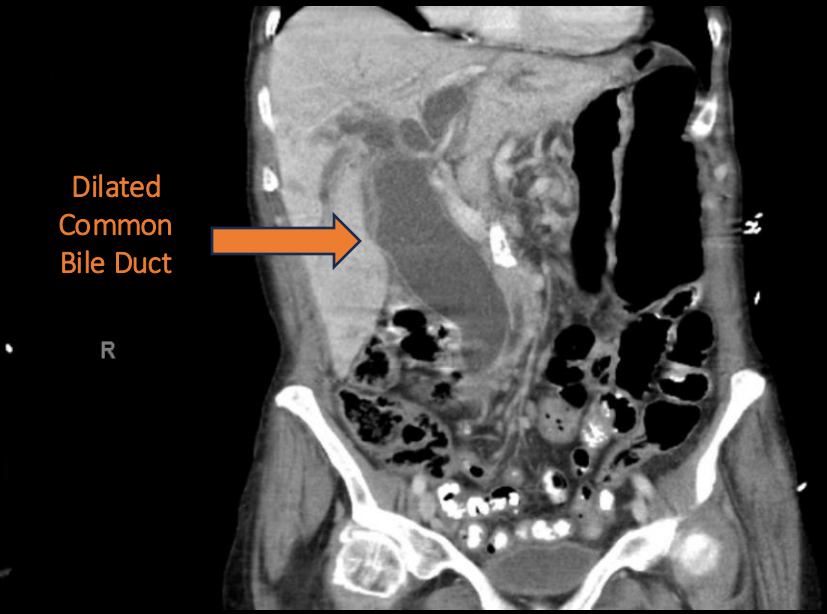
Findings: (labeled)





- Massive intrahepatic and extrahepatic bile duct dilation with pancreatic duct dilation due to stones.
- Findings most likely represent chronic obstruction.

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Final Dx:

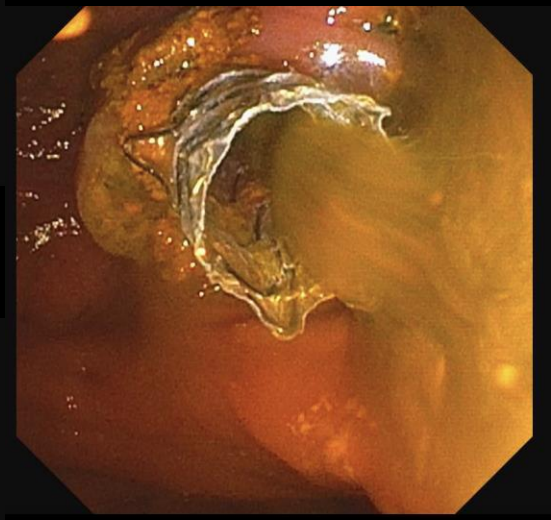
Choledocholithiasis causing ascending cholangitis
40 years post-cholecystectomy

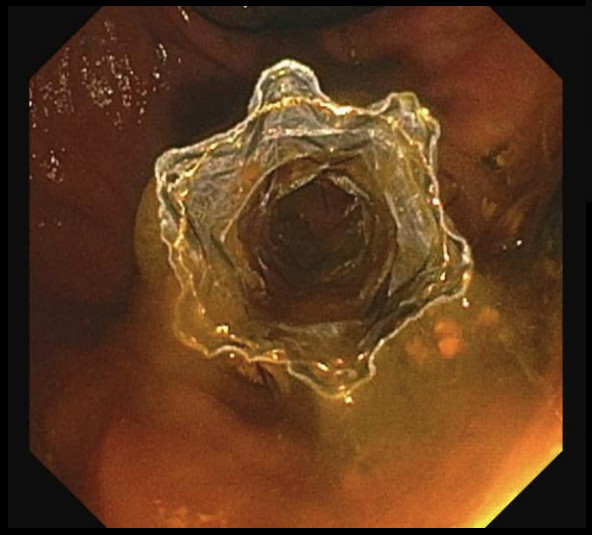
What is the next step in management?

ERCP (Endoscopic Retrograde Cholangiopancreatography)

ERCP is an advanced technique commonly used as the primary treatment of biliary stones, malignant obstructions, and acute cholangitis. [2]

- Many stones and inflammatory materials were removed, however some stones remained throughout main ducts and extrahepatic ducts
- One 10 mm by 6 cm temporary covered metal biliary stent was placed 5 cm into the common bile duct, in good position
- Repeat ECRP is planned within the next 4-8 weeks due to extensive duodenitis, stent removal, and retreatment





Case Discussion

Background

- Incidence of choledocholithiasis is rare among patients with history of cholecystectomy, approximately 0.4 %. Insufficient cases have been reported in patients with a history of cholecystectomy over 40 years ago, especially with concurrent substance use. [3]

Diagnosis

- Clinical features include biliary colic pain, cholangitis, obstructive jaundice, nausea, and vomiting. [4]
- Radiographic features include Dilated common bile duct, hyperdense stones, and biliary filling defects. [4]

Etiology

- Majority of bile duct stones are secondary, having passed from the gallbladder, though primary stone formation within the duct can occur. Recurrent stones are typically pigment-based and may be associated with chronic bacterial colonization. [3]
- History of cholecystectomy and opiate use are known to be associated with common bile duct dilation. Post-cholecystectomy surgical clip migration is also a rare cause of common bile duct stone formation.[5,6]

Case Discussion

Management

- ERCP with sphincterotomy for stone extraction is the first-line treatment for choledocholithiasis and prevent recurrence. Possible surgical exploration can be an option if ERCP fails. [2]

Prognosis:

- Excellent and favorable prognosis with timely ERCP and stone removal with a success rate of approximately 93%. Less than 20% of patients experience recurrence of symptoms after therapeutic procedures. [2,7]

Complications:

- ERCP therapy itself may be associated with complications such as perforation, pancreatitis, bleeding, and infection. [2]
- Risk of recurrent stones or cholangitis exists, especially if the gallbladder is not surgically removed after ERCP treatment. Untreated choledocholithiasis can lead to serious complications such as cholangitis, pancreatitis, or biliary cirrhosis.

Case Discussion

Patient Outcome

- Abdominal pain is less intense on repeat evaluation. Patient has downward trending LFTs and WBC.
- Blood cultures grew E coli and Klebsiella with possible extended-spectrum beta-lactamase, patient was started on broad spectrum antibiotic therapy for bacteremia with Cefepime, Vancomycin, and Metronidazole.
- GI will re-evaluate for concern of re-obstruction and repeat endoscopy. Addiction medicine also consulted for concomitant withdrawal due to heroin use.

Patient was able to be discharged on admission day 4 post-ERCP.

References:

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