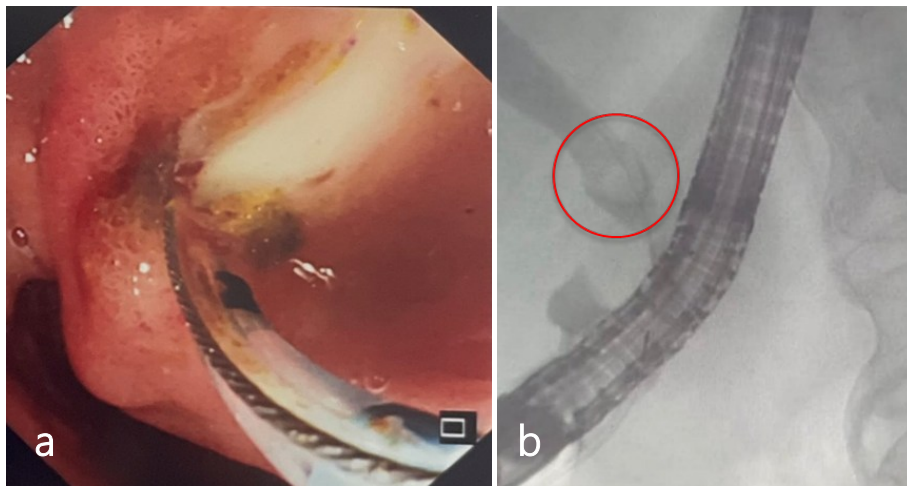


Acute Cholangitis

Afifah SHAZALI, Chiaw Yuan TAN, Aye Aye TUN, Sumitro KOSASIH



A 60-year-old man presented with two days of intermittent right upper quadrant pain and vomiting, but no fever. Two months prior, he was treated for biliary sepsis and an ultrasound scan of the abdomen showed multiple gallstones and acute cholecystitis. His current laboratory investigations showed mild neutropenia and abnormal liver enzymes (Bilirubin 140 $\mu\text{mol/L}$, ALT 532 U/L, ALP 421 U/L, GGT 534 U/L). A computed tomography (CT) scan of the abdomen showed a dilated common bile duct (CBD) measuring 13 mm (normal ≤ 6 mm) and mild intrahepatic ductal dilatation, with no intraluminal stone visible. Endoscopic retrograde cholangiopancreatography (ERCP) was done and cannulation of the papilla led to drainage of pus and extracted some sludge (**Figure a**), and fluoroscopy showed the cause of obstruction (**Figure b**; indicated by the red circle).

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Acute cholangitis secondary to choledocholithiasis

This patient was treated for acute cholangitis with intravenous antibiotics, sphincterotomy and biliary stenting to decompress the biliary system (**Figure 2a**). The CT scan also showed a sealed gallbladder perforation into the gallbladder bed (**Figure 2b**).

Acute cholangitis is a serious hepatobiliary condition characterised by bacterial infection of the biliary tree in the setting of biliary obstruction. The most frequent cause is gallstone (either migration from the gallbladder into the CBD or primary biliary stone), followed by neoplasms (cholangiocarcinoma, pancreatic head tumour and nodal compression), and less common inflammatory (Ig4 sclerosing cholangitis), or iatrogenic factors (benign strictures etc).

Common presentations include jaundice, abdominal pain, especially right upper quadrant pain, and fever which represent the classic Charcot's triad of ascending cholangitis. In severe cases, mental status changes and hypotension may be presented in addition to the triad, resulting in the Reynold's pentad. However, these symptoms are present in only 50–70% of cases and with limited sensitivity.¹

Elderly patients and patients with multiple comorbidities may have atypical presentations, hence diagnosis may be challenging. Imaging is important to establish a diagnosis. Ultrasound scan, CT scan, magnetic resonance cholangiopancreatography (MRCP) and endoscopic ultrasound (EUS) are common imaging modalities used.^{2,3}

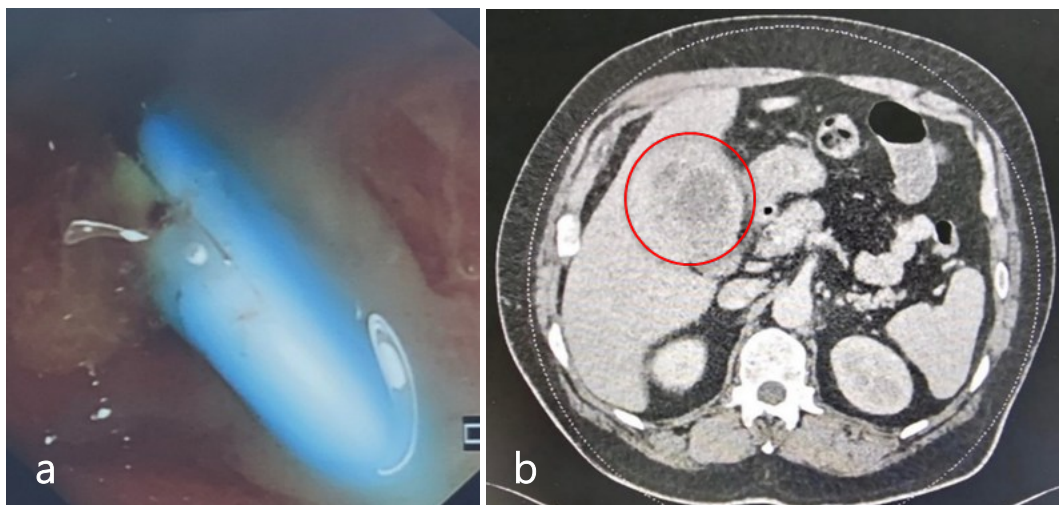
Interestingly, studies have reported that up to 20% of patients with suspected cholangitis may have no stones detected on initial imaging due to stone passage or small calculi.⁴

Early recognition and timely intervention is important, with initiation of broad spectrum antibiotic, haemodynamic support and biliary decompression are critical to improve outcomes. Decompression can be done through ERCP or percutaneous decompression. A meta-analysis showed that early ERCP, when done within <24 hours of presentation, was associated with a 20%–50% reduction in mortality compared to those late ERCP (>24 hours).⁵ Furthermore, ERCP performed <24 hours compared with ≥24 hours resulted in an approximately 3-day reduction in hospital stay.⁶

Our patient recovered and was discharged well within 48 hours after biliary drainage with referred for early cholecystectomy.

Abbreviations

ALT	Alanine aminotransferase
GGT	Gamma glutamyl transferase
ALP	Alkaline phosphatase
CBD	Common bile duct
ERCP	Endoscopic retrograde cholangiopancreatography
CT	Computed tomography
EUS	Endoscopic ultrasound
MRCP	Magnetic resonance cholangiopancreatography



Figures 2: a) ERCP placement of stent allowed drainage of frank pus, and b) CT scan showing hypodense part of the liver corresponding to the liver abscess from the gallbladder rupture.

Declarations

Patient Consent

Patient consent has been obtained.

Disclosure and Conflict of Interest

The authors declare that they have no conflicts of interest and no financial disclosures relevant to this case report.

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None.

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