

## Case Report

# Cholelithiasis: Radiographic Findings and a Case Report

Chin-Chu Wu<sup>1</sup>, Aming Chor-Ming Lin<sup>2,3\*</sup>

<sup>1</sup>Department of Medical Imaging, Shin Kong Wu Ho-Su Memorial Hospital, Taipei, Taiwan

<sup>2</sup>Emergency Department, Shin Kong Wu Ho-Su Memorial Hospital, Taipei, Taiwan

<sup>3</sup>School of Medicine, Fu-Jen Catholic University, New Taipei City, Taiwan

### Article History

Received: 26.12.2025

Accepted: 23.02.2026

Published: 26.02.2026

### Journal homepage:

<https://www.easpublisher.com>

### Quick Response Code



**Abstract:** A 44-year-old-woman presented to the emergency department with a 3-day history of abdominal pain. Her temperature was 38.8°C. On physical examination, there was tenderness in the right upper quadrant of her abdomen and yellow skin. Two days before presentation, she had noted the appearance of tea color urine. Computed tomography (CT) of the abdomen revealed gallbladder stones, common bile duct stones (CBD) and findings consistent with cholangitis. A diagnosis of obstructive jaundice and cholangitis secondary to CBD stones was made. Endoscopic retrograde cholangiopancreatography (ERCP) was performed.

**Keywords:** Cholelithiasis, Common Duct Stones, Endoscopic Retrograde Cholangiopancreatography.

**Copyright © 2026 The Author(s):** This is an open-access article distributed under the terms of the Creative Commons Attribution **4.0 International License (CC BY-NC 4.0)** which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.

## INTRODUCTION

Common bile duct (CBD) stones are a major cause of acute cholangitis and represent one of the most frequent etiologies of community-acquired bacteremia. Gallstones may lead to acute cholecystitis, gallstone pancreatitis, cholangitis, or choledocholithiasis. CBD stones associated with obstruction jaundice are a common cause of acute abdomen and are frequently diagnosed in the emergency department based on Charcot's triad: fever, right upper quadrant abdominal pain, and jaundice.

Herein, we report a case of choledocholithiasis successfully treated as antibiotics and ERCP.

## CASE PRESENTATION

A 44-year-old woman presented to the emergency department with a 3-day history of abdominal pain. On arrival, she was hemodynamically stable. Her blood pressure was 130/75 mmHg, with a heart rate of 96 beats per minute, respiratory rate 16 breaths per minute. She was febrile. On physical examination, there was tenderness in the right upper quadrant of her abdomen and yellow skin. She had no history of hypertension, diabetes mellitus, malignancy or prior surgery. Two days before presentation, she had noted

tea-colored urine. Laboratory investigations showed a leukocyte count 13,800/mm<sup>3</sup> with 90% neutrophils, hemoglobin 10.8 gram/deciliter, platelet 252000/microliter, and an international normalized ration (INR) of 0.8. Other laboratory findings included: glucose 100 milligram/deciliter, blood urea nitrogen (BUN) 30 mg/dl, serum creatinine 1.1 mg/dl, sodium 136 mEq/L, potassium 4.0 mEq/L and glutamic oxaloacetic transaminase (SGOT) 96 U/L, alanine aminotransferase (ALT) 288 U/L, alkaline phosphatase (ALP) 459 U/L, total bilirubin 4.5 mg/dl, direct bilirubin 3.66 mg/dl lipase 101 U/L and CRP 6.26 mg/dl. Ultrasonography demonstrated a dilated CBD with stones and multiple gallbladder stones within a distended gallbladder. No intrahepatic bile duct dilatation was observed. The patient underwent abdomen-pelvis computed tomography (CT) scan. CT of the abdomen confirmed gallbladder stones, CBD wall thickening and CBD stones (Figure 1, arrows). A diagnosis of with obstructive jaundice and cholangitis secondary to CBD stones was made.

The patient was admitted and treated with intravenous fluids, analgesics and antibiotics for cholangitis. Intravenous Ceftriaxone was initiated. ERCP was performed within 24 hours. The patient recovered with intravenous antibiotics and ERCP

\*Corresponding Author: Aming Chor-Ming Lin

Emergency Department, Shin Kong Wu Ho-Su Memorial Hospital, 95 Wen Chang Rd, Taipei 111, Taiwan

intervention. She had an uneventful recovery and was discharged 5 days later.



**Figure 1: Coronal abdominal CT image demonstrating common bile duct stones (arrows) and findings consistent with cholangitis**

## DISCUSSION

Abdominal pain is a common complaint in the emergency department, accounting for approximately 7-10 % of all visits, and it often presents a diagnostic challenge [1]. Patients with choledocholithiasis may present to the emergency department with symptoms of severe right upper quadrant pain, nausea and vomiting, potentially leading to life-threatening complications such as pancreatitis, cholangitis, jaundice and sepsis. Choledocholithiasis is the presence of gallstones within the CBD. CBD stones are present in approximately 10%–20% of patients with symptomatic gallstones [2]. Initial evaluation of suspected choledocholithiasis should include a thorough abdominal examination and laboratory testing. Ultrasonography is usually the first-line diagnostic modality, however CT imaging may be required to determine the size, number, and location of CBD stones [3].

Ascending cholangitis is a life-threatening condition caused by bacterial infection of the biliary tree secondary to obstruction. Choledocholithiasis is the most common cause of biliary obstruction. Early ERCP (within 24–48 hours) is the recommended standard for patients with symptomatic or complicated CBD stones,

particularly in the presence of acute ascending cholangitis, as it significantly reduces hospital stay and complications [4]. Obstructive jaundice occurs in 74%-82% symptomatic patients with CBD stones [5]. Delayed diagnosis and management of CBD stones leading to acute cholangitis may result in significant morbidity and mortality [6].

## CONCLUSION

Choledocholithiasis may be asymptomatic but can also present with severe right upper quadrant abdominal pain, fever and jaundice, Charcot's triad remains a classic clinical presentation of acute cholangitis. Thorough history taking, abdominal examination, diagnostic test of ultrasonography and CT are essential for the diagnosis of the condition. Early ERCP intervention in patients with complicated CBD stones significantly reduces hospital stay and associated complications.

**Acknowledgments:** We would like to express our special thanks to Shin Kong Wu Ho-Su Memorial Hospital staff.

**Conflict of Interest:** None declared.

**Funding Support:** None declared.

**Ethical Approval:** Written informed consent was obtained from the patient and participant for publication of her individual details and accompanying images in this manuscript. Her information has been de-identified to the best of our ability to protect her privacy.

**Authors' Contributions:** All authors passed four criteria for authorship contribution based on recommendations of the International Committee of Medical Journal Editors.

## REFERENCES

1. Cervellin G, Mora R, Ticinesi A, Meschi T, Comelli I, Catena F, Lippi G. Epidemiology and outcomes of acute abdominal pain in a large urban Emergency Department: retrospective analysis of 5,340 cases. *Ann Transl Med.* 2016 Oct;4(19):362. doi: 10.21037/atm.2016.09.10. PMID: 27826565; PMCID: PMC5075866.
2. Sebghatollahi V, Parsa M, Minakari M, Azadbakht S. A clinician's guide to gallstones and common bile duct (CBD): A study protocol for a systematic review and evidence-based recommendations. *Health Sci Rep.* 2023 Sep 12;6(9):e1555. doi: 10.1002/hsr2.1555. PMID: 37706014; PMCID: PMC10496460.
3. Kim CW, Chang JH, Lim YS, Kim TH, Lee IS, Han SW. Common bile duct stones on multidetector computed tomography: attenuation patterns and detectability. *World J Gastroenterol.* 2013 Mar 21;19(11):1788-96. doi: 10.3748/wjg.v19.i11.1788. PMID: 23555167; PMCID: PMC3607755.
4. Lyu Y, Wang B, Ye S, Cheng Y. Impact of the Timing of Endoscopic Retrograde Cholangiopancreatography for the Treatment of Acute Cholangitis: A Meta-analysis and Systematic Review. *Surg Laparosc Endosc Percutan Tech.* 2022 Dec 1;32(6):764-769. doi: 10.1097/SLE.0000000000001110. PMID: 36223305; PMCID: PMC9719833.
5. Wang X and Li Z (2025) Management of common bile duct stones: a comprehensive review. *Front. Surg.* 12:1658784. doi: 10.3389/fsurg.2025.1658784.
6. Zhu B, Li D, Ren Y, Li Y, Wang Y, Li K, Amin B, Gong K, Lu Y, Song M, Zhang N. Early versus delayed laparoscopic common bile duct exploration for common bile duct stone-related nonsevere acute cholangitis. *Sci Rep.* 2015 Jun 30;5:11748. doi: 10.1038/srep11748. PMID: 26123122; PMCID: PMC4485235.

---

**Cite This Article:** Chin-Chu Wu & Aming Chor-Ming Lin (2026). Choledocholithiasis: Radiographic Findings and a Case Report. *EAS J Radiol Imaging Technol.* 8(1), 13-15.

---