



NAVIGATING ACUTE CHOLANGITIS: A CASE REPORT ON EMERGENCY ERCP AND BILIARY STENTING

Surgery

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ABSTRACT

This case report discusses a 46-year-old woman with acute cholangitis due to bile duct obstruction. Presenting with fever, jaundice, and abdominal pain, she underwent emergency endoscopic retrograde cholangiopancreatography (ERCP) that revealed significant pus in the bile duct. A biliary stent was placed, and intravenous antibiotics administered, leading to rapid improvement. The report underscores the critical importance of prompt ERCP and vigilant follow-up in managing acute cholangitis effectively.

KEYWORDS

Acute cholangitis, ERCP, Biliary stent, Choledocholithiasis.

INTRODUCTION

Acute cholangitis, also known as ascending cholangitis, is a potentially life-threatening condition characterized by the infection and inflammation of the biliary tree¹. It is commonly associated with bile duct obstruction, often due to gallstones, tumors, or strictures. The clinical presentation typically includes Charcot's triad: fever, jaundice, and right upper quadrant pain. If left untreated, acute cholangitis can progress to sepsis, shock, and multi-organ failure. Prompt diagnosis and intervention are crucial for patient outcomes. Endoscopic retrograde cholangiopancreatography (ERCP) with stent placement is a cornerstone in the management of this condition, as it facilitates biliary drainage and infection control.²

Case Report

A 46-year-old female presented to the emergency department with a four-day history of fever, jaundice, and abdominal pain. The pain was localized to the right upper quadrant and was associated with nausea and vomiting. On examination, the patient was febrile (temperature: 38.5°C), icteric, and exhibited tenderness in the right upper quadrant. Laboratory investigations revealed the following:

- **White blood cell count:** 16,000 cells/mm³ (elevated)
- **Total bilirubin:** 8.0 mg/dL (elevated)
- **Direct bilirubin:** 6.5 mg/dL (elevated)
- **Liver enzymes:** Elevated

An abdominal ultrasound showed gallstones in the gallbladder and common bile duct (CBD), with evidence of biliary dilatation. Given the clinical presentation and laboratory findings, a diagnosis of acute cholangitis secondary to choledocholithiasis was made.

The patient underwent an emergency ERCP. During the procedure, a large amount of pus was noted coming out of the ampulla of Vater. Multiple balloon sweeps were performed, removing significant sludge and pus, though the stone could not be retrieved. A 7 Fr x 7 cm double pig-tail CBD stent was placed, ensuring free flow of bile and pus. The patient was monitored in the hospital and received intravenous antibiotics.

The patient's condition improved rapidly, with resolution of fever and abdominal pain. She was hemodynamically stable and symptomatically free at the time of discharge the next day.

DISCUSSION

Acute cholangitis is a critical condition requiring swift medical intervention. The combination of fever, jaundice, and right upper quadrant pain, known as Charcot's triad, is a classical presentation, though not always present. Laboratory findings typically show leukocytosis and elevated bilirubin levels. Imaging, particularly ultrasound, is essential for identifying biliary obstruction and stones.³

The treatment of acute cholangitis involves both medical and endoscopic interventions. Antibiotic therapy is crucial for managing the infection, with broad-spectrum antibiotics covering gram-negative and anaerobic organisms being the initial choice. According to guidelines, empirical antibiotics should be tailored based on local resistance patterns and patient-specific factors.⁴

ERCP is both diagnostic and therapeutic in acute cholangitis. It allows for visualization of the biliary tree, identification of the obstruction, and immediate intervention. The procedure involves sphincterotomy, stone extraction, and stent placement if necessary. In this case, the presence of pus indicated a severe infection, and the placement of a biliary stent facilitated drainage and relief of obstruction. ERCP has been shown to significantly reduce mortality and morbidity in patients with acute cholangitis.⁵

The failure to retrieve the stone during the initial ERCP highlights a common challenge. Follow-up procedures or alternative approaches, such as percutaneous transhepatic cholangiography (PTC) or surgical intervention, may be required for complete stone removal. Literature reviews indicate that approximately 10-15% of patients may require additional procedures due to incomplete stone extraction during the initial ERCP. The use of broad-spectrum antibiotics is crucial in managing the infection and preventing sepsis.⁶

CONCLUSION

This case underscores the importance of prompt recognition and treatment of acute cholangitis. ERCP plays a vital role in the management, offering both diagnostic and therapeutic benefits. Despite the initial inability to remove the calculus, the patient's condition improved significantly with the intervention performed, illustrating the efficacy of biliary drainage and infection control. Continued vigilance and appropriate follow-up are necessary to address any residual stones and prevent recurrence.

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