

Gangrenous cholecystitis – a rare complication of ERCP



Figure 1 An endoscopic retrograde cholangiopancreatography picture demonstrating nonobstructed, nondilated, tortuous cystic duct (black arrow).

A 56-year-old male underwent an elective endoscopic retrograde cholangiopancreatography (ERCP) following an episode of cholangitis. Abdominal ultrasound prior to ERCP showed contracted acalculous gallbladder. ERCP revealed normal bile ducts (● **Figure 1**). Sphincterotomy was performed. The procedure was uneventful. The patient was admitted to the hospital 48 hours later due to increasing abdominal pain. Physical examination revealed right abdominal tenderness with normal vital signs. Liver function tests were normal; white blood cell (WBC) count was 14600/mm³. Computed tomography (CT) scan demonstrated small air bubbles adjacent to the duodenum and a gallbladder filled with contrast material (● **Figure 2 a,b**).

Antibiotics were initiated due to suspected duodenal microperforation. The pain had increased 24 hours later; temperature was 39°C, and WBC count was 20100/mm³. A repeat scan demonstrated an inflammatory process with air bubbles around the porta hepatis and a contrast-filled gallbladder.

Emergency laparotomy revealed a necrotic gallbladder with stones and no duodenal perforation. A cholecystectomy was performed. Postoperative recovery was uneventful.

Acute cholecystitis is a rare complication of ERCP [1–4]. The mechanism is not clear. Cystic duct obstruction was suggested by the CT scan. A stone pushed by



Figure 2 A CT of the abdomen performed 48 hours after the ERCP showing **a)** extraluminal air in the porta hepatis (black arrow), **b)** gallbladder filled with contrast material (black arrow).

the contrast material might cause the obstruction. However, in other reported cases [1–3], emphysematous cholecystitis was attributed to gallbladder wall distension and ischemia, due to the contrast material with no stones. In our case a combined mechanism probably led to gallbladder necrosis. Post-ERCP cholecystitis is not necessarily instantaneous and may take 48 hours to develop. The consideration of other, more common post-ERCP complications causes delay in diagnosis [1]. It is important to emphasize that retroperitoneal air bubbles around the duodenum is found in up to 30% of asymptomatic patients following ERCP and sphincterotomy [5].

Acute cholecystitis should be suspected in a septic patient following ERCP even when retroperitoneal air bubbles are demonstrated. A gallbladder filled with contrast material may be a clue for the di-

agnosis. Urgent surgical intervention is recommended.

Endoscopy_UCTN_Code_CPL_1AK_2AC

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DOI 10.1055/s-2007-966549

Endoscopy 2007; 39: E223–E224

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ISSN 0013-726X

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