Acute Emphysematous Cholecystitis

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A 78-year-old diabetic male presented to our emergency room with intermittent fever and right upper abdominal pain for 2 weeks. His initial vital signs were within normal range except for a mild fever. Laboratory data showed white cell count 15200/mm³ with a left shift. Physical examination revealed severe right hypochondrial tenderness and Murphy’s sign was detected. Abdominal ultrasonography showed hyperechoic shadow around the gallbladder suspected emphysematous cholecystitis (Fig. 1). Emergent computed tomography (CT) scan of the abdomen revealed the presence of a gallstone, gallbladder thickening and an air-fluid level within the gallbladder wall (Fig. 2) -findings consistent with emphysematous cholecystitis. The patient received empirical antibiotic and then underwent emergent cholecystectomy. Ischemic

Fig. 1  Ultrasonography of the gallbladder showing hyperechoic shadow (arrows) around the gallbladder suspected emphysematous cholecystitis

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and gangrenous gallbladder was found. Then he received postoperative intensive care treatment. Bile culture yielded *Klebsiella pneumoniae*. The patient discharged on the 9th postoperative day in stable condition.

**Emphysematous cholecystitis** is an uncommon but life-threatening form of acute cholecystitis caused by the presence of gas-forming organisms in the gallbladder, such as *Clostridia* species, *Escherichia coli*, *Klebsiella* species, and anaerobic streptococci. Emphysematous cholecystitis frequently affects elderly men, and it is usually associated with diabetes mellitus. The risk of gangrene and perforation of the gallbladder is relatively high for patients with emphysematous cholecystitis\(^1\). The mortality rate for emphysematous cholecystitis is 15% to 20%, owing to the increased incidence of gallbladder wall gangrene and perforation in these patients. This variance emphasized the importance of prompt diagnosis and early surgical intervention\(^1,2\). The diagnosis based on the demonstration of varying amounts of gas in the gallbladder lumen and wall, and occasionally in the bile ducts\(^3\) or pericholecystic area, can be made from plain abdominal radiography, ultrasonography, or more accurately by computed tomography scan\(^4\). CT scan is the most definitive modality when findings on plain radiography or ultrasonography are equivocal\(^5\).

**References**

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