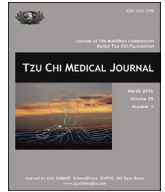




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Emphysematous cholecystitis



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A 52 year-old man without significant previous medical problems presented to the emergency department with epigastric pain and anorexia for a week. Physical examination revealed normal vital signs but tenderness in the right upper quadrant of the abdomen. He had leukocytosis with a left shift. A plain abdominal radiograph revealed a gas-forming lesion with perilesional air trapping (Fig. 1, arrow) in the right upper quadrant. Abdominal computed tomography showed an enlarged gall bladder with intraluminal (Fig. 2, letter a) and intramural air (Fig. 2, arrowheads), which confirmed the diagnosis of emphysematous cholecystitis. He received an emergency cholecystectomy and a gangrenous gallbladder was removed. During hospitalization, elevated blood glucose and glycated hemoglobin (HbA1c; 9%) levels were found, confirming a diagnosis of diabetes mellitus. The patient received a complete course of postoperative broadspectrum antibiotic therapy and was discharged 2 weeks after admission.

Emphysematous cholecystitis, a variant of acute cholecystitis, has different pathological features from typical cholecystitis and commonly affects elderly diabetic men [1]. Unlike typical cholecystitis, in which cholelithiasis is the major pathogenesis, the etiology of emphysematous cholecystitis is related to ischemia of the gallbladder wall, which may be related to atherosclerotic changes in vessels, and infection with gasforming bacteria, such as *Clostridium perfringens*, *Klebsiella* species, and *Escherichia coli* [2]. Diabetes mellitus is also a confounding factor for emphysematous cholecystitis. The mortality rate from emphysematous cholecystitis is around 15%, higher than that of typical uncomplicated

cholecystitis (1.4%) [3,4]. Furthermore, the incidence of gallbladder perforation is 5 times higher than in typical cholecystitis [1]. Due to the high mortality rate, prompt diagnosis and intervention are imperative. Radiography, ultrasonography, and computed tomography of the abdomen can provide much information for early diagnosis of this disease [5]. The typical radiological finding in emphysematous cholecystitis is air in the lumen or wall of the gall bladder, or adjacent soft tissue. Cholecystectomy is the standard treatment for emphysematous cholecystitis. Temporary percutaneous cholecystostomy can be another choice in a few select patients [4]. Concurrent broadspectrum antibiotic therapy is also necessary [1,4].



Fig. 1. Supine abdominal plain radiograph showing a gasforming lesion with perilesional air trapping (arrow) in right upper quadrant.

Conflict of interest: none.

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Fig. 2. Abdominal computed tomography showing an enlarged gall bladder with intraluminal (indicated by letter a) and intramural air (indicated by arrowheads).

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