

CONTINUING MEDICAL EDUCATION ΣΥΝΕΧΙΖΟΜΕΝΗ ΙΑΤΡΙΚΗ ΕΚΠΑΙΔΕΥΣΗ

Surgery Quiz – Case 47

A 66-year-old male with a history of acute myocardial infarction with second degree Mobitz II atrioventricular block treated with primary triple vessel percutaneous transluminal coronary angioplasty and permanent pacing 6-months ago under prasugrel 10 mg and acetylsalicylic acid 100 mg once daily, presented to the emergency department with right upper quadrant abdominal pain with associated palpable tender mass. Upon admission the patient had temperature 37.8 °C, mean arterial pressure 88 mmHg, heart rate 105/min. Clinical examination revealed right upper quadrant wall rigidity, abdominal distention and hypoactive bowel sounds. Laboratory tests were remarkable for white blood cells (WBCs) $13 \times 10^9/L$ and C-reactive protein (CRP) 30 mg/L. Contrast-enhanced computed tomography (CT) revealed cholelithiasis, high density bile, mild gallbladder wall thickening, pericholecystic fat stranding, no bile duct dilatation and interestingly a couple of air bubbles in gallbladder lumen, as shown in figure 1 (arrow).

What is your diagnosis?

Comments

The patient suffered from moderate acute cholecystitis. The pres-

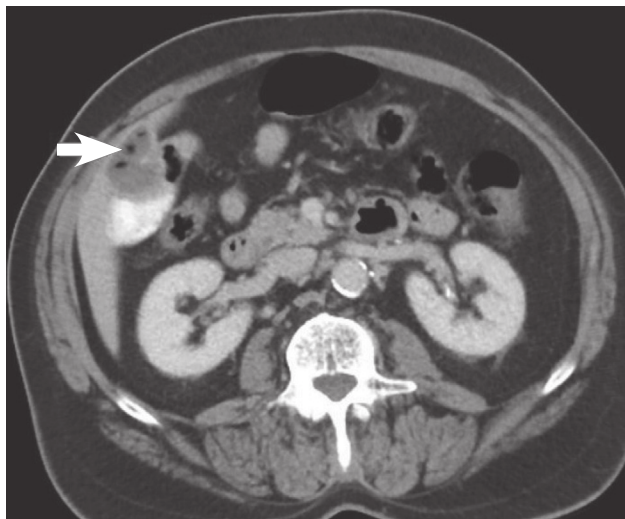


Figure 1.

ARCHIVES OF HELLENIC MEDICINE 2023, 40(4):569
ΑΡΧΕΙΑ ΕΛΛΗΝΙΚΗΣ ΙΑΤΡΙΚΗΣ 2023, 40(4):569

K. Sitaridis,
I. Domi,
M. Nathanailidou,
G. Chatziioannis,
K. Boulas,
G. Sourtse,
A. Hatzigeorgiadis

Department of General Surgery, General
Hospital of Drama, Drama, Greece

ence of air in gallbladder raised suspicion of emphysematous cholecystitis as other causes such as biliary-enteric fistula (spontaneous or iatrogenic), endoscopic retrograde cholangiopancreatography (ERCP) sphincterotomy, cholangitis from gas forming organisms excluded, except from gas in gallstones. In the present ASA-III patient, medical treatment initiated. Taking into consideration that percutaneous biliary drainage wasn't available in our secondary referral hospital and the extremely rapid progression and high mortality of the suspected emphysematous cholecystitis, early open-cholecystectomy performed which revealed a Parkland-II acute cholecystitis with no evidence of gallbladder gangrene or perforation and normal aspiration-fluid. As no evidence of emphysematous cholecystitis was present based on intraoperative findings, gas in gallstones in the setting of mild acute cholecystitis was the correct diagnosis. Gas in gallstones is a rare but well described radiological finding. Fissures, usually fluid-filled, are present in up to 50% of gallstones. Less than half of these fissured gallstones contain some amount of nitrogen gas. The radiolucency caused by the gas usually appears in a triradiate pattern, reminiscent of the Mercedes-Benz sign, which was not typically present in our patient's case.

References

1. NEPAL P, OJILI V, KAUR N, TIRUMANI SH, NAGAR A. Gas where it shouldn't be! Imaging spectrum of emphysematous infections in the abdomen and pelvis. *AJR Am J Roentgenol* 2021, 216:812–823
2. HUERTA S, KAKATIR, LANIER H. Gas-containing biliary calculi: Case series and a systematic review. *Am Surg* 2022; 31348221121553

Corresponding author:

K. Boulas, Department of General Surgery, General Hospital of Drama, 661 00 Drama, Greece
e-mail: boulaskonstantinos@gmail.com

Diagnosis: Gas in gallstones in the setting of mild acute cholecystitis