

Case	(093) Acute emphysematous cholecystitis with secondary pylephlebitis
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CASE PRESENTATION

63 year old male with diabetes mellitus and periferal vasculopathy who came to the emergency department referring asthenia, vague lumbar pain, choluria and acholia of recent appearance, showing signs of sepsis (fever and hypotension).

DISCUSSION

An abdominal ultrasound was performed, disclosing a hydroptic gallbladder with thickened walls and bubbles inside, and abundant aerobilia in the left hepatic lobe, suspicious of emphysematous cholecystitis.

The abdominal MDCT showed mural thickening and hypoenhancement of the gallbladder wall. No mural emphysema was visible, but abundant intraluminal gas, creating a fluid-air interface with a wavy appearance (pomegranate sign). A lithiasis was visible in the infundibulum. Aerobilia in the left biliary tree and in the cystic duct was also visible. A repletion defect of the left portal branch was identified, indicating secondary thrombophlebitis.

Additionally, signs suggestive of shock with periportal edema, hypoperfusion of the liver (right lobe) and spleen, adrenal hyperfunctionalism and renal function delay existed. The findings were suggestive of emphysematous cholecystitis with secondary portal thrombophlebitis (pylephlebitis) and associated signs of septic shock.

CONCLUSION

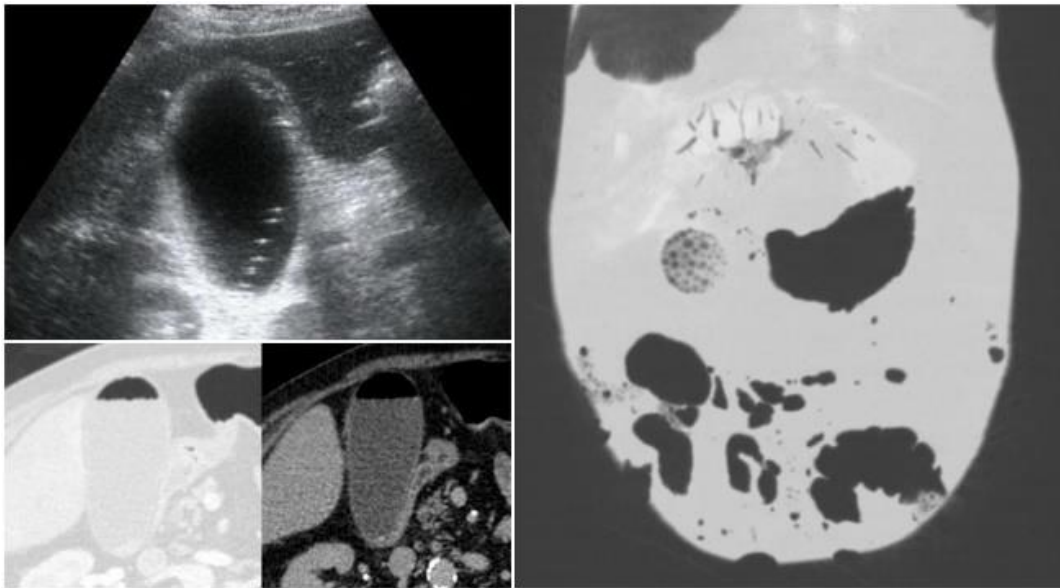
Emphysematous cholecystitis is characterized by inflammation of the gallbladder wall causing necrosis and gas formation. Visualization of intraluminal or intramural gas are the most specific signs suggesting this form of cholecystitis, being the computed tomography the most adequate imaging modality for this finding.

Visualization of gas in the bile ducts is rare due to cystic duct obstruction. However, emphysematous cholecystitis is commonly not linked to biliar lithiasis (acalculous cholecystitis), occurring secondary to other diseases, mainly vasculopathy (vasculitis, diabetes mellitus...).

Other emerging radiologic signs could be useful in diagnosing an emphysematous cholecystitis, for example the 'pomegranate sign'. This sign has been described in intrathoracic pathologic gas-fluid levels, consisting on a wavy air-fluid interface occurring due to a complication of a cavity or space containing fluid (exhudate). Correlation with surgical and microbiological findings is essential to determine the usefulness of this finding; in this case, a dense bile was drained during the surgery.

Air visualization through other imaging modalities (i.e. ultrasound), provides other signs highly specific of this disease. The 'champagne sign', in which echogenic foci rising up from the dependent portions of the gallbladder lumen are visible, is one of them.

Complication of emphysematous cholecystitis, for example perforation or gangrene, generally implies a bad prognosis. Other forms of complication can appear, such as secondary thrombophlebitis or septic shock.



BIBLIOGRAPHY

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