Title:
Emphysematous hepatitis: a very rare entity with a poor prognosis

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DOI: 10.17235/reed.2021.7795/2021
Link: PubMed (Epub ahead of print)

Please cite this article as:

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Emphysematous hepatitis: a very rare entity with a poor prognosis
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Conflict of interest: the authors declare no conflict of interest.

Dear Editor,

A 67-year-old woman, with no alterations in glucose metabolism or other relevant history, was attended the emergency department for abdominal pain and vomiting after a syncopal episode. Physical examination revealed a poor general condition, mild stupor and a distended abdomen, painful on palpation in the right hypochondrium, with localised rigidity. On arrival at the emergency department, BP 150/66 mmHg, HR 110 beats/minute and temperature of 35ºC. Laboratory tests on admission: glycaemia 388 mg/dL, AST 2345 U/L, ALT 2174 U/L, amylase 70 U/L, CRP 30.44 mg/dL, leukocytes 22950, neutrophils 94 %, procalcitonin 86.58 mg/ml, albumin 2.7 g/dL, Hb 13.5 g/dL, platelets 102x103/µL, prothrombin time 63 %, INR 1.35 and fibrinogen 570 mg/dL. Initial venous blood gases showed pH 7.25, pCO2 48.9 mmHg, pO2 339.3 mmol/L and HCO3 20.8 mmol/L. Computed tomography (CT) (Fig 1) revealed a hypoattenuated area of geographic margins in the right hepatic lobe extending through segments VI, VII and VIII, with abundant air in the hepatic parenchyma at this level. In the sagittal section, calcifications in the aorta were highlighted, which although they could suggest a primary ischaemic origin of the process, it is unlikely given the absence of ischaemic antecedents in other locations and the CT scan didn’t show any disturbance of afferent or efferent flow. Due to the septic symptoms, urgent surgery was performed through a right subcostal laparotomy, performing drainage, debridement
and placement of an intrahepatic Foley catheter for lavage. The culture was positive for E. coli.

After a torpid postoperative course, the patient required prolonged systemic antibiotic therapy and percutaneous drainage (pigtail) of the residual hepatic collection (Fig 2). Finally, she was discharged. After 3 years of follow-up, she remains asymptomatic and the ultrasound control only shows a scarred area in segment VII.

Discussion

Emphysematous Hepatitis is a rare entity, with rapid progression and frequent fatal outcome\textsuperscript{1}. Its diagnosis requires high clinical suspicion and imaging techniques. Its occurrence is favoured by any state of immunosuppression, such as diabetes and cancer\textsuperscript{2}, and the most frequently implicated germs are Streptococcus mutans, Enterococcus faecalis, E. coli, Klebsiella, Enterobacter, Pseudomonas and Proteus\textsuperscript{1,2,3}. Emphysematous changes in the liver can occur in different clinical scenarios involving anaerobic microorganisms such as superinfected liver haematoma, after invasive procedures such as sphincterotomy, radiofrequency ablation or ethanol injection in hepatocellular carcinoma, and in post-transplant hepatic artery thrombosis\textsuperscript{2}. Given its rapid progression and the ineffectiveness of percutaneous drainage, urgent surgical debridement seems the only alternative to try to avoid total liver parenchymal replacement\textsuperscript{2,3}. Even so, it is an entity with a poor prognosis.

References


Figure 1 Abdominal CT: (A) axial section, (B) coronal section. Hypoattenuated area suggesting hypoperfusion, that extends through segments VI, VII and VIII, with abundant air in the hepatic parenchyma at this level.

Figure 2 Abdominal CT after surgery. (A) axial section, (B) coronal section. Very significant reduction in the size of the liver abscess in segment VII, with pigtail drainage in its interior and practical resolution of the adjacent hypoattenuated areas.