

Title:

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Spontaneous liver rupture secondary to distal right hepatic artery microaneurysms in a patient admitted due to *Staphylococcus aureus* pneumonia

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Palabras clave: Spontaneous liver rupture. Subcapsular liver hematoma. Microaneurysm. Angiographic embolization.

Dear Editor,

We report the case of an 81-year-old male hospitalized due to pneumonia with a FINE risk class of IV, two blood cultures that were positive for *Staphylococcus aureus* and no evidence of cardiac vegetations. On the fourth day, he exhibited sudden and intense right upper abdominal quadrant pain that radiated to the shoulder. Physical examination revealed arterial hypotension, tachycardia, oliguria, skin pallor, tenderness and distension in the right upper abdominal quadrant. Laboratory tests demonstrated a hemoglobin level of 6.1 g/dl, hematocrit of 22%, aspartate aminotransferase at 4,353 UI/l, alanine aminotransferase at 1,952 UI/l and international normalized ratio (INR) of 1.2.

An urgent abdominal computed tomography showed a bulky hepatic subcapsular hematoma and a destructurement of upper segments of the liver and a moderate amount of hemoperitoneum, all suggestive of a liver rupture. Different points of active arterial bleeding in right hepatic artery were identified (Fig. 1A). Due to the age, comorbidities and the high mortality rate associated with surgery, we decided on a minimally invasive treatment of angiographic embolization of the right hepatic artery.

A good angiographic and clinical outcome was obtained (Fig. 1B).

Discussion

Spontaneous liver rupture remains an uncommon and life-threatening condition that is often associated with a high mortality rate (1). It is predominantly related to pregnancy (preeclampsia and HELLP syndrome) (1), as well as malignant and benign liver tumors (2). Other less frequently associated situations include anticoagulant treatment, peliosis hepatis (3), connective tissue disease, amyloidosis (5) or post-imatinib administration for metastatic gastrointestinal stromal tumor (GIST). It is rarely associated with microaneurysm formation derived from inflammatory processes (4).

Computed tomography and ultrasonography play a decisive role in the detection and characterization of hematomas. Treatment includes observation, angiographic embolization, hepatic artery ligation, hepatic lobectomy, hematoma evacuation and packing and even liver transplantation (1,3,5). Treatment should be adapted depending on the extent of the rupture, hemodynamic situation and expertise available (1).

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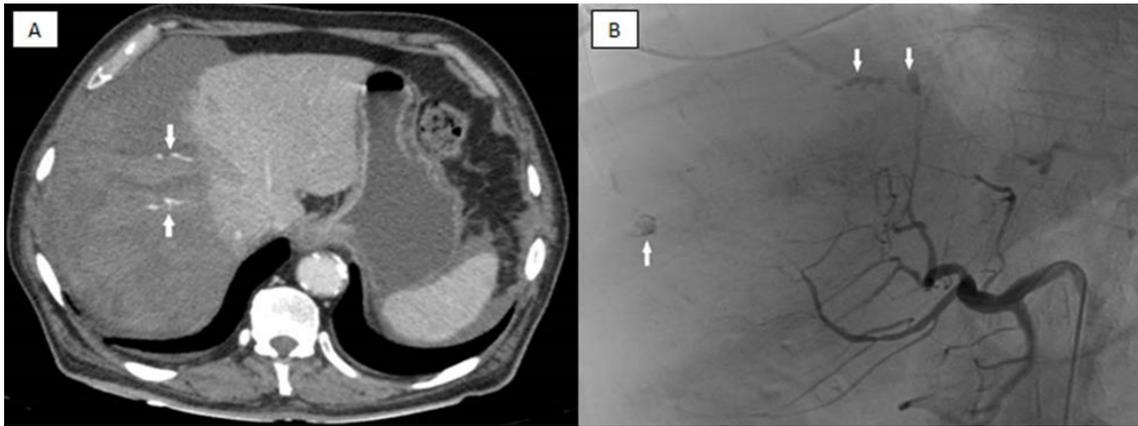


Fig. 1. A. Abdominal computed tomography. Voluminous subcapsular hepatic hematoma. Destructuration of the right hepatic lobe. Contrast extravasation suggestive of active arterial bleeding (arrows). B. Arteriography. Active arterial bleeding of distal branches of the right hepatic artery (arrows).