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Spontaneous rupture of the liver in a patient admitted for subarachnoid hemorrhage

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ABSTRACT

INTRODUCTION: Spontaneous rupture of the liver is a rare event often associated with the presence of malignant liver disease or occurring in the context of a HELLP syndrome.

We present a case of spontaneous rupture of the liver in a patient admitted to our Intensive Care Department with hemoperitoneum in the aftermath of recent surgical clipping of a cerebral aneurysm.

PRESENTATION OF CASE: We report a 50-year-old woman who was transferred from the Bolzano Hospital Department of Neurosurgery to the Intensive Care Unit with anemia and the occurrence of major abdominal pain.

DISCUSSION: Spontaneous hepatic rupture remains a rare event, associated more often than not with pregnancy or traumatic events. The treatment of hemorrhage due to spontaneous rupture of the liver includes, in addition to serial monitoring of hemoglobin values, in cases of unstable patients, embolization, hepatic resection and packing.

CONCLUSION: The case described here shows that spontaneous rupture of the liver may be due to indefinable causes and that its treatment remains complex and multidisciplinary.

1. Introduction

Spontaneous rupture of the liver is a rare event often associated with the presence of malignant liver disease or occurring in the context of a HELLP syndrome.[1] The cases reported in the literature refer to hepatic rupture in pregnancy or cases in the context of the rupture of a hepatocellular adenoma, in idiopathic peliosis hepatis[2,3] and other more rare conditions such as coagulation disturbances[4] and connective tissue disease like amyloidosis.[5]

The clinical case described here is one of a female patient admitted to our Intensive Care Department for spontaneous rupture of the liver in the aftermath of recent surgical clipping of a cerebral aneurysm.

2. Presentation of case

A 50-year-old woman was transferred from the Bolzano Hospital Department of Neurosurgery to the Intensive Care Unit as a result of anemia (hemoglobin down to 8.2 g/dl) and the occurrence of major abdominal pain in the right hyperchondrium.

On examination, the patient was normotensive (blood pressure 125/70 mmHg, pulse rate 90/min) and had a firm, tender abdomen.

An ultrasound examination of the abdomen was performed, showing a fluid collection in the perihepatic region and in the pelvic area, partly with an echogenic appearance.

The patient had been admitted a week earlier to the Neurosurgery Department following a subarachnoid hemorrhage due to a bleeding aneurysm of the right pericallosal artery, treated with a right frontal craniotomy and clipping.

The postoperative course was described as uneventful.

The patient and her husband denied the possibility of a trauma related to the cerebral hemorrhage.

An abdominal CT scan was performed with contrast medium showing a voluminous fluid collection in a subcapsular site along the ventral margin of the liver. In the context of this collection, moreover, the presence of a circumscribed leakage of arterial contrast medium was observed at the level of the 4th segment. A diffuse fluid collection was also present in all the peritoneal recesses (Figs. 1 and 2).

The patient was then given a blood transfusion with 2 units of packed red blood cells with an increase in hemoglobin from 8.2 to 8.7 g/dl.

The patient was subjected to hepatic angiography which revealed no signs of arterial leakage of contrast medium, but showed multiple petechial images in the peripheral portions of the hepatic parenchyma. We then proceeded with reversible gelatin

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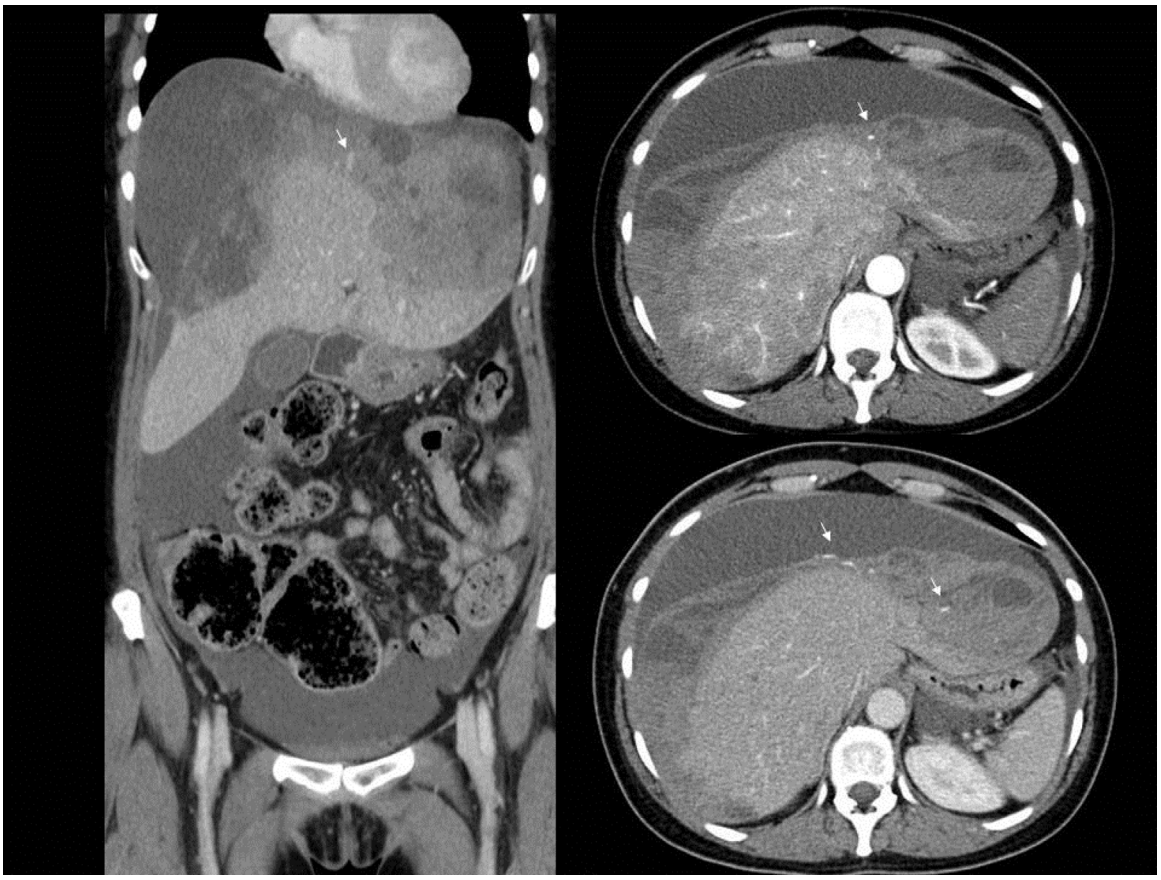

Fig. 1. Coronal portal-venous phase (left) and axial arterial and portal-venous phase (right) CT images show a large subcapsular hematoma displacing liver parenchyma downward and backward. Spotty contrast extravasation is present (white arrows).

Fig. 2. Common hepatic artery (left) and selective left hepatic artery angiograms show diffuse petechial images and two pseudoaneurysm-like images in the peripheral liver parenchyma. No clear contrast medium extravasation is evident. A double right hepatic artery is seen on the left angiogram (variant).