Fatal spontaneous haemoperitoneum from rupture of cirrhotic liver nodule

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ABSTRACT

We report a rare case of acute massive fatal spontaneous hemoperitoneum in a 51 year old African male. Death occurred suddenly in this patient who had no previous medical history or clinical signs of liver disease and apparently in good health. Autopsy findings showed a massive hemoperitoneum from ruptured cirrhotic liver nodule. Though rupture is a rare complication of liver cirrhosis and other nodular liver diseases, patients should be managed with this possibility in mind.

Keywords: Fatal, haemoperitoneum, cirrhosis, nodule, rupture.

INTRODUCTION

Non-traumatic haemoperitoneum is commonly caused by rupture of the abdominal aorta frequently due to aneurysm or any of its branches. Liver cirrhosis in our community is mainly due to hepatitis B and C infection and rarely following alcohol abuse. Cirrhosis of any etiology will result in distortion of vascular and biliary channels in the liver. Concomitant necrosis of hepatocytes and reparative regeneration results in hepatic nodules of various dimensions walled off by fibrous bands. In hepatitis, the cirrhotic nodules are 3cm or more in diameter ie macronodular. There is a mild risk of rupture of these nodules reported in literature with consequent haemoperitoneum. The bleeding is usually mild to moderate and chronic with antecedent medical history of liver disease. In the case that we report, bleeding was acute, severe and fatal in a middle-aged African male without any previous medical history suggestive of liver disease.

CASE REPORT

KS is a 51 year old radiology technician for 15 years, married and father of 4 children. He consumed alcohol sparingly, never smoked and had never shown any signs or symptoms of liver disease. He was reported to have suddenly collapsed while in a public transport vehicle and died a few moments later before any medical attention could be sought. At autopsy alongside the striking pallor of the sclera and internal organs, about 4 litres of mostly uncoagulated blood was found in the peritoneal cavity (Figure I).

Figure I. Ruptured macronodular cirrhotic nodule, source of hemoperitoneum.
The liver weighed about 2,400gm and was cirrhotic with nodules measuring between 3-5cm diameter. One of the largest nodules was ruptured (see figure II). The heart and aorta did not show any macroscopic lesions. No rupture was found in the abdominal aorta or any of its branches. A biopsy and histological analysis of the liver revealed cirrhosis with a severe dysplasia of hepatocytes. A post mortem serologic test was positive for hepatitis B. A conclusion of massive hemoperitoneum from rupture of post hepatitis cirrhotic liver nodule was made.

**DISCUSSION**

Although fatal rupture of hepatic nodules is more common in Africans and Asians and is reportedly infrequent in the United States of America, this is the first case with autopsy confirmation in our community. Haemoperitoneum from rupture of liver nodules in primary or secondary liver disease has been reported in literature. Primary hepatic nodules are found in cirrhosis and hepatoma, while secondary nodules occur from various primary sites including the lung, kidney or esophagus. When rupture occurs, the bleeding is usually chronic and mild. However in some cases, like the one we report, the bleeding is sudden, abundant and fatal. The common complications following a hepatitis B infection include cirrhosis and hepatoma. In our patient, malignant transformation of liver cells was observed as high-grade dysplasia as in other reports. Prognosis in these patients is usually poor, with or without surgical intervention and mortality could be up to 84%.

Rupture with massive hemoperitoneum may occur in hepatic nodules from malignant or benign liver disease. Bleeding can be chronic in patients with clinical signs of liver disease or acute, massive and fatal even in patients with no clinical history of the disease as reported in this case. Clinical management of patients with nodular liver disease whether of malignant or benign etiology should envisage rupture as a likely complication.

**REFERENCES**