

Spontaneous Hepatic Subcapsular Hematoma

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ABSTRACT

A 47-year-old male presented with right hypochondrial pain radiating to the right shoulder associated with nausea and vomiting along with fever. Primary investigations showed significant neutrophilic leukocytosis. Initial impression was liver abscess. Further evaluation suggested the presence of liver cirrhosis complicated by hepatic subcapsular hematoma. Patient was managed conservatively at the beginning but he continued to deteriorate and hematoma increased in size. Hepatic artery angiography showed no signs of active bleeding. Later on his condition deteriorated further due to sudden intraperitoneal hemorrhage, which did not respond to emergency surgery or resuscitative measures. Operative finding and histopathology findings were consistent with hepatocellular carcinoma.

Key words Hepatic subcapsular hematoma, Hepatocellular carcinoma, Pain-hypochondrium.

INTRODUCTION:

Spontaneous liver hemorrhage is a life-threatening problem that requires a high index of suspicion for accurate and early diagnosis. A subcapsular hematoma of the liver is localized bleeding between Glisson's capsule and liver parenchyma. In about 75% cases it occurs around the right lobe and has 75% mortality when ruptures. The risk factors for subcapsular hematoma include anticoagulants use, liver tumors etc.¹ This case report describes management of one such patient admitted under our care.

CASE REPORT:

A 47-year-old man presented to emergency department with 14 days history of right hypochondrial pain radiating to the right shoulder and back. He also complained of fever, nausea and vomiting. He was diagnosed with hypertension one year ago and was an ex-alcohol consumer and stopped few months prior to the presenting complaints. On examination patient looked ill with pulse of 150 bpm, regular, blood pressure 119/80mmHg, temperature 37.6° C, oxygen saturation 97% on room air. Chest examination revealed reduced air entry at the right lower zone. There was tenderness in right hypochondrium. Patient was admitted to medical ward with possible diagnosis of liver abscess.

Investigations done showed WBC: $26.2 \times 10^3/\text{ul}$, hemoglobin 10.9 g/dl, albumin: 3.0 g/dl, alkaline phosphatase 355 U/L, ALAT (SGPT) 71 U/L, total bilirubin 1.6 mg/dl, gamma GT 471 U/L, ammonia 23 umol/L. Blood culture was negative. PT was 15.2 seconds, INR 1.3, APTT 48.3 seconds. Hepatitis B surface Ag and hepatitis C antibodies were negative. X-ray chest showed presence of fluid on right side (Fig 1).

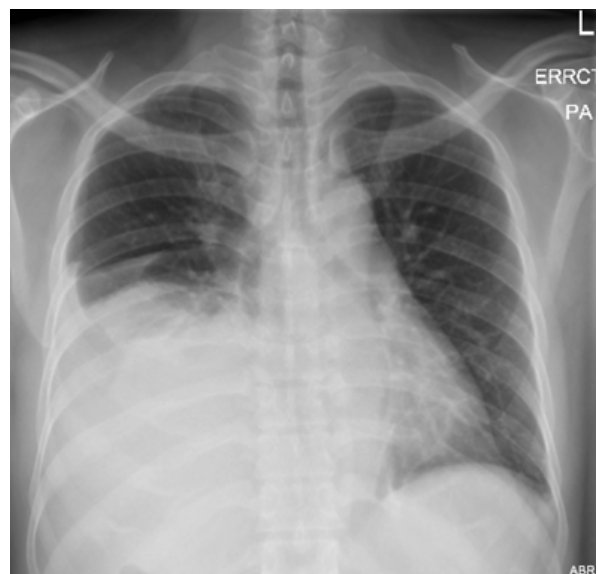


Fig 1: Chest x-ray showing fluid on right side

On second day of admission ultrasound and CT scan of the abdomen and pelvis suggested liver cirrhosis with splenomegaly and paraesophageal varices.

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A large subcapsular hepatic hematoma with no definite underlying liver lesion was noted. There was a heterogeneous area in the superior part of the right liver lobe with moderate right sided pleural effusion and collapse / consolidation of the right lower lung lobe (Fig. II).



Fig II: CT scan of abdomen showing heterogeneous area in liver.

Further work up showed alpha feto protein 1.2 IU/mL (normal). FNA of liver showed inflammatory cells composed of mainly lymphocytes, few neutrophils and few histiocytes; admixed with hemorrhage. No malignant cells were seen. Pleural fluid shows inflammatory cells composed mainly of lymphocytes. Two weeks later CT scan was repeated and showed moderate right sided pleural effusion with compression/collapse of the right lower lobe. The dome of the diaphragm was very high in position reaching the fifth intercostal space with increase in the size of the subcapsular liver hematoma. Hyperdense areas were suggestive of acute hemorrhage. Our differential diagnoses behind hepatic hematoma included hepatic trauma, hepatocellular carcinoma, hepatic adenoma and liver abscess. Patient was started on broad-spectrum iv antibiotics.

After CT scan report, the surgical team reviewed the case. Few days later patient desaturated due to large right side pleural effusion and was shifted to ICU for few days. FNA of liver attempted by surgeon in ICU revealed hemorrhagic fluid and cytology showed no malignant cells. Pleural fluid aspiration also showed hemorrhagic fluid and cytology was negative. Despite the use of multiple antibiotics regimens, his WBC count increased to 66,000. Bone marrow aspiration was done to rule out hematologic malignancy and showed reactive picture.

Due to increase in subcapsular hematoma noted in repeat CT scan, he was sent for selective angiography of the hepatic artery and embolization

by interventional radiologist. There was no active sign of bleeding therefore no attempt of embolization was made. Surgical team was not in favor of exploratory laparotomy as this patient already had a high risk for operative procedure.

Later on patient suffered sudden hemodynamic deterioration with hemorrhagic shock for which emergency exploratory laparotomy was done. Operative findings revealed blood clots, metastatic tumour tissue with diffuse seeding on peritoneum of upper abdomen, liver and stomach. Suction washout and packing of right sub-diaphragmatic region was done. Tumour tissue from liver, anterior wall of stomach and lateral peritoneum was sent for histopathology. No active surgery could be performed, as the entire liver was cirrhotic. In ICU resuscitative measures were taken but patient could not be revived. Histopathology report of liver, stomach wall, and peritoneum biopsy favored carcinoma and the appearances were morphologically those of a malignant epithelial tumor, which goes with the diagnosis of hepatocellular carcinoma.

DISCUSSION:

Rupture of the tumor with intraperitoneal hemorrhage is a life threatening complication of HCC.²⁻⁴ Hypertension, liver cirrhosis and aggressive behavior of the tumor are considered predictors of spontaneous rupture of HCC as noted in our patient.² There is still a debate about the best management in case of rupture.² Mortality rate of ruptured HCC is very high (25-75%) same happened in index case where after all intensive and aggressive measures patient died.²⁻⁴ Spontaneous liver hemorrhage should be considered in the differential diagnosis of sudden-onset right upper quadrant abdominal pain radiating to the right shoulder associated with hepatomegaly.

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