

An Interesting Case of a Large Spontaneous Sub Capsular Hematoma of Liver

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Abstract

Spontaneous sub capsular hematoma of the liver is a rare clinical condition, more commonly seen in pregnancy when associated with pre-eclampsia and HELLP (Hemolysis Elevated Liver Enzymes and Low Platelets) Syndrome. It is also reported in patients with gross anatomical liver lesions, coagulopathy, bleeding disorders and those on anti-coagulants. We report a 44-year-old female patient who presented with sudden onset of diffuse abdomen pain. Computed Tomography (CT) scan of abdomen showed spontaneous large sub capsular hematoma of liver. Our patient did not have any of the above-mentioned conditions. To our knowledge and as per the literature reviewed, this is one of the largest sub capsular hematoma of the liver ever reported. Spontaneous sub capsular hematoma of the liver is an infrequent occurrence in clinical practice. It is an accumulation of blood between the hepatic parenchymal tissue and its overlying Glisson capsule thereby stretching it and causing abdominal pain and discomfort. Liver hematoma does not have a distinctive clinical presentation and the symptoms with which patient present to the hospital include abdominal discomfort and right upper abdominal pain. Prompt recognition may be entertained in patients presenting with sudden onset abdominal pain and CT scan done early in doubtful cases may aid in early diagnosis. Patients can be treated with non-operative management in cases of hemodynamic stability with vigilant monitoring.

Keywords: *Case report; Large sub capsular hematoma; Liver hematoma; Spontaneous hematoma; Acute abdomen*

1. Introduction

Spontaneous sub capsular hematoma of the liver is a rare clinical condition, more commonly seen in pregnancy when associated with pre-eclampsia and HELLP (Hemolysis Elevated Liver Enzymes and Low Platelets) Syndrome. It is also reported in

patients with gross anatomical liver lesions, coagulopathy, bleeding disorders and those on anti-coagulants. We report an interesting presentation of a large spontaneous sub capsular hematoma of liver in a 44-year-old female with none of the above-mentioned conditions. To our knowledge and as per the literature reviewed, this is one of the largest sub capsular hematoma of the liver ever reported.

2. Case Report

A 44-year-old female presented to our emergency department with complaints of worsening neck pain, right shoulder pain and right arm pain for the past few days. Symptoms worsened 24 hrs prior to the presentation and included sudden onset of diffuse abdominal pain accompanied by bloating and nausea. She also complained of weakness and easy fatigability. She denied any history of trauma or fall. Her past medical history was significant for being thalassemia minor and was taking regular oral iron supplements. Vital signs showed a blood pressure of 92/50 mm Hg, heart rate 74/min with normal body temperature. On examination, abdomen was mildly distended, with generalized tenderness and guarding in the right upper quadrant of abdomen. Patient was started on treatment with intravenous analgesia and intravenous fluids. Blood tests revealed a white cell count of 14.6 K/ul with neutrophils of 80.8%, hemoglobin - 7.5 gm/dl with a hematocrit of 23.5, C - reactive protein - 54.35 mg/l. Other lab tests including liver function tests, serum urea, creatinine, amylase and lipase were all within normal limits. A CT Scan of Abdomen and Pelvis with Oral and Intravenous Contrast was done which revealed an extensive sub capsular hematoma of liver measuring 22 cm × 11 cm × 6 cm with approximately 300 ml - 400 ml of blood surrounding the right lobe of liver with moderate free fluid in the pelvic cavity (FIG. 1 & 2).

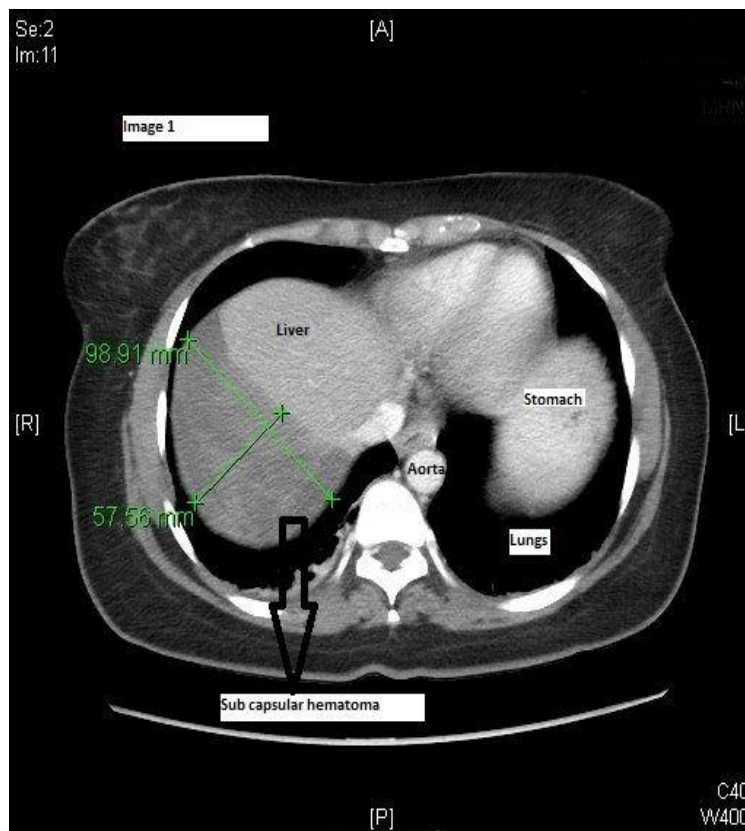


FIG. 1. Axial View Showing Sub Capsular Hematoma of Liver.

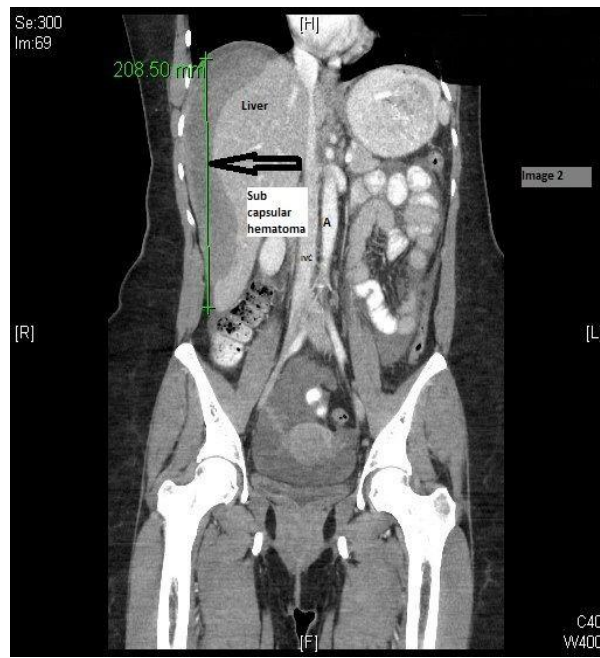


FIG. 2. Coronal View Showing Sub Capsular Hematoma of Liver.

After discussion with the on call surgical team, patient was admitted in the intensive care unit for close monitoring with a possibility of emergency exploration and liver packing if her vital signs destabilized. 3 packed red blood cell packs were arranged and transfused along with intravenous analgesia and she was kept nil per oral. Our patient responded well to non-operative management and was shifted to general ward with gradual introduction of diet which she tolerated well. Her hemoglobin was raised to 9.0 g/dl but she began with intermittent fever spikes and was started on empirical intravenous antibiotics. Patient was discharged on the 11th day and remained healthy on follow up. The size of the hematoma was reduced to 13cm in two months of follow up and patient complaints of discomfort were getting progressively better (FIG. 3).

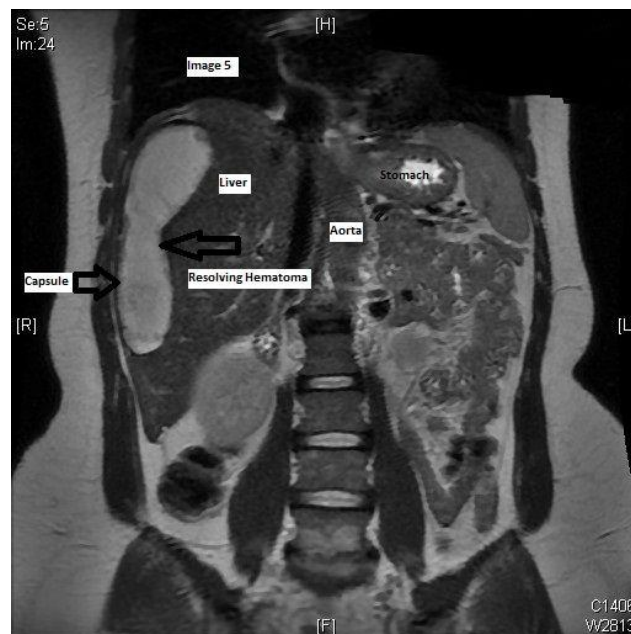


FIG. 3. Coronal View Showing Resolving Hematoma.

3. Discussion

Spontaneous sub capsular hematoma of the liver is an infrequent occurrence in clinical practice. It is an accumulation of blood between the hepatic parenchymal tissue and its overlying Glisson capsule thereby stretching it and causing abdominal pain and discomfort. It is usually seen in the right lobe of the liver in approximately 75% of the cases [1] as also described in our case and rupture into the peritoneal cavity has been correlated with a mortality rate of 75% as well [2]. The hematoma arises more commonly in pregnant ladies and is associated with preeclampsia and HELLP Syndrome [3,4]. Trauma to the liver has also been implicated in various cases especially blunt trauma in susceptible individuals and iatrogenic cases have been dealt with as well after endoscopic retrograde cholangiopancreatography, liver biopsy and biliary surgery. Other risk factors observed include underlying benign and malignant liver tumors, hemodialysis, warfarin treatment, coagulopathy, peliosis hepatis, amyloidosis and periarteritis nodosa [5,6]. This clinical case is unique in the sense that none of the known risk factors defined were observed in our patient. Although a few cases have been reported with spontaneous hematoma like our presented case but the size of the hematoma at 22 cm × 11 cm × 6 cm as reported in our case is the largest one to date [2,7].

Liver hematoma does not have a distinctive clinical presentation and the symptoms with which patient present to the hospital include abdominal discomfort and right upper abdominal pain [8]. Due to the non-specific nature of its symptomatology, clinical diagnosis can be challenging, and radiological assistance is certainly required to confirm the diagnosis. Computed tomography (CT) scan is notably valuable in this regard as it can determine the age and extent of the hematoma with much accuracy. The hematoma presents as a lenticular, ellipsoid collection and are typically hyper dense in the acute setting due to high protein content which decreases over time as hemoglobin undergoes gradual lysis in the chronic stage [9].

Most of the spontaneous non ruptured liver hematomas tend to be contained and patients are hemodynamically stable enough to warrant conservative management. But there is always a potential for rupture which would necessitate an urgent surgical lifesaving intervention. Hence, the need for close monitoring in a high dependency or intensive care unit is mandatory with serial hematocrits and imaging to keep an eye on progression and patient's clinical condition. In case of expansion of the hematoma, an interventional radiological procedure may be instituted if circumstances allow and facilities are available but urgent surgical mediation may be necessary if any hemodynamic compromise is recognized.

4. Conclusion

A diagnosis of spontaneous sub capsular liver hematoma may be entertained in patients presenting with sudden onset abdominal pain and CT scan done early in doubtful cases may aid in early diagnosis. Patients can be treated with non-operative management in cases of hemodynamic stability with vigilant monitoring.

5. Conflict of Interest

The authors certify that we have no affiliations with or involvement in any organization or entity with any financial interest or non-financial interest in the subject matter or materials discussed in this manuscript.

6. Sources of Funding

None

7. Ethical Approval

Ethical approval obtained from Mediclinic Research and Ethics Committee

8. Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

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