

Post-partum Rupture of liver Haematoma in a Patient with HELLP Syndrome: A Case Report

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Abstract

Hepatic rupture from haematomas is a rare complication of HELLP syndrome. Subcapsular liver haematoma has been reported in less than 2% of cases complicated by HELLP syndrome. It is associated with increased perinatal & neonatal mortality. A careful aggressive & multidisciplinary approach is crucial for saving the lives of patients with hepatic rupture. Most liver haematomas with subcapsular rupture occur antenatally but also in the post-partum period. This report presents a 37-year-old woman with a hepatic rupture from subcapsular liver haematoma secondary to HELLP syndrome diagnosed during post-partum period.

Keyword: HELLP, HDU, USG, DIC, SLH.

Introduction:

The HELLP syndrome (Hemolysis, Elevated Liver enzymes, low platelet count) is a pregnancy-related complication in patients with preeclampsia. Subcapsular liver haematoma has been reported in less than 2% of pregnancies complicated by HELLP syndrome (1). It is associated with increased maternal and perinatal morbidity and mortality. The incidence of rupture of subcapsular liver haematoma varies from 1:40,000 to 1: 250,000 (2). The causes of subcapsular and intraparenchymal hepatic hematomas in HELLP syndrome are not known absolutely. Liver distention and, as a consequence, right upper quadrant or epigastric pain may occur with the obstruction of blood flow in the hepatic sinusoids. Also, this obstruction may lead to periportal necrosis and, in severe cases, intrahepatic haemorrhage, subcapsular hematoma formation or hepatic rupture (3).

Case-Report:

A 37-year-old lady, para 1 (delivered by caesarean section) gravid 2, was admitted at her 34+5 weeks of pregnancy at Rajshahi Medical College Hospital with the diagnosis of HELLP syndrome. The patient complained of epigastric pain for 3 days & a frontal headache. Her blood pressure was 160/100mm Hg. Laboratory findings revealed- Urine albumin 3+, Hb

concentration 10.8g/dl, Platelet count 76.00k/ μ L, AST serum ALT 87 U/L, AST 63 U/L. Serum uric acid 5.70mg/dl. Serum creatinine 0.73mg/dl, Prothrombin time (PT) 14 sec INR 123.

Obstetrical ultrasonography (USG) showed: average gestational age 34 weeks with an estimated fetal weight of 2.3kg. Intravenous labetalol and magnesium sulfate was given to the patient as initial management. A lower segment caesarean section was performed & healthy male baby of 2.0kg was delivered & the patient was shifted to HDU. Twenty-four hours post-partum, the patient was shifted to her cabin. The patient complained of increasing epigastric pain; drain tube collection was increased from 80ml to 1100ml of fresh blood. The patient went into shock, for which dopamine & blood transfusion started. Then decision for emergency laparotomy was taken in combination with the surgery unit. On exploratory laparotomy, 200ml of hemorrhagic fluid was suctioned, the uterine wound was healthy with no bleeding point.

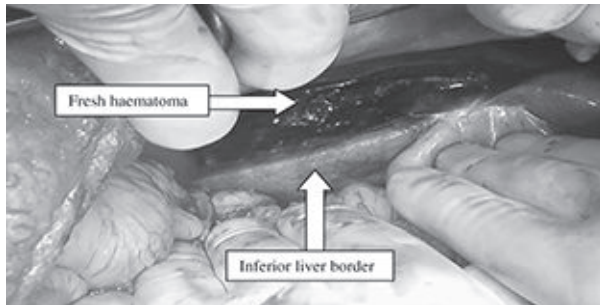
During peritoneal toileting, a large clot was found on the undersurface of the left lobe of the diaphragm. The bleeding was found to be emanating from a ragged laceration on the anterior aspect of the right lobe of the liver which was fully accessible without the need for mobilization of the liver (figure 1).(4) The incision

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(Source: <http://www.wjes.org/content/4/1/23>)

Fig 1: Per-operative finding of rupture of liver haematoma in HELLP syndrome

was extended to the xiphisternum. A large clot was removed from the anterior surface of the liver, and the large haematoma was found occupying the superior surface of the left lobe of the liver that was compressed with the hot mop. The haemostatic suture was given, and the abdomen was closed with a drain tube in the subhepatic and pouch of Douglas. Massive blood transfusion of total 14 units and 2 units fresh frozen plasma, the intravenous antibiotic was given postoperatively according to the medical board's decision. Follow up investigation at 24 hours showed: Hb: 9.70g/dl, Platelet count: 90.00k. μ L, ALT: 850 U/L, AST: 120 U/L, S. creatinine: 0.78mg/dl, ECG and cardiac troponin were within normal limits.

USG finding:

24 hours after relaparotomy, subhepatic drain tube collection was increased to 800ml of fresh blood. But the patient was treated conservatively according to the medical board's decision. Over time, drain tube collection was reduced, and the drain tube was removed on 14th postoperative day. Liver enzyme after 4 weeks- Serum ALT level 814 U/L, Serum AST 120U/L. The patient was discharged with amlodipine atenolol combination therapy, advised for regular follow up (5).

Discussion:

HELLP syndrome and other hypertensive disorders are the most common cause of maternal mortality in Bangladesh. That adverse maternal outcome could be seen in 38% of women with HELLP syndrome (6). These major maternal complications include disseminated intravascular coagulation (DIC), abruptio placentae, acute renal failure, pulmonary oedema, and subcapsular liver hematoma. Expansion of

subcapsular liver hematoma (SLH) secondary to a traumatic condition like abdominal palpations, patient transportation, manual removal of placenta, uterine contraction and vomiting can induce rupture of the hepatic capsule (7).

The patients with HELLP syndrome commonly present with severe epigastric pain right upper quadrant pain with signs of hypovolemia and anaemia. As in our patients' presentations is largely antenatal. Only a few cases are described as occurring in the post-partum period (8). USG, CT scan or MRI has a role in confirming the diagnosis of liver haematoma, but due to rapid deterioration of the clinical condition, there is often a scarcity of time to transfer patients for imaging. So clinical conditions & laboratory parameters are a valuable guide for the course of management. This condition is closely associated with pre-eclampsia/eclampsia and HELLP syndrome which all call for urgent haematologic evaluation for end organ dysfunction (6).

Conclusion:

Multigravidas are substantially more likely to experience both spontaneous hepatic rupture and HELLP syndrome at the same time. The cornerstone of the care of these situations is the engagement of a multidisciplinary team, which includes expert obstetricians, hepatobiliary surgeons, and neonatologists.

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