

Surviving the odds: a near-fatal case of HELLP syndrome with massive hemorrhage

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Introduction:

Subcapsular liver hematoma is spontaneous bleeding between the Glisson's capsule and the liver parenchyma. It is estimated to occur in 1%-2% of patients with pre-eclampsia.

Case Presentation:

A 39-year-old woman, gravida 7, para 6, at 27 + 3 weeks gestation, with a known case of gestational diabetes, was transferred by ambulance from the primary clinic to the emergency department as a case of pre-eclampsia. In the primary clinic, she complained of epigastric pain and vomiting that started 1 day ago. She denied headache, visual changes, chest pain, dyspnea, edema, or vaginal bleed. On physical examination, she was hypertensive, her abdomen was tender to palpation, with no peritoneal signs or hepatomegaly, and her neurologic examination showed brisk deep tendon reflexes. Her cardiorespiratory examination was unremarkable. She had experienced one eclamptic seizure, occurring in the ambulance, en-route to the hospital. Upon hospital presentation, she was tachypneic and her blood pressure measured 181/108. Initial investigations revealed thrombocytopenia (platelet count: 78,000/ml), transaminitis (AST: 2882 IU/L and ALT: 1825 IU/l), LDH elevation (>1,800 IU/l), and 3+ proteinuria on urinalysis. She also had a deranged coagulation profile and kidney functions consistent with disseminated intravascular coagulation and acute kidney injury, respectively. Fetal heart rate abnormalities were seen with prolonged deceleration, as well as the patient's mental status was deteriorating, so she was rushed for an emergency caesarean delivery. Intraoperatively, upon pelvic exploration, a significant amount of hemoperitoneum was identified. The source was suspected to be hepatic in origin. In view of this finding, the general surgery team was urgently consulted. Subsequent exploratory laparotomy revealed a large subcapsular hepatic hematoma, consistent with spontaneous hepatic rupture secondary to preeclampsia. The hematoma was drained, and the liver was packed. The estimated intraoperative blood loss was approximately 5 liters. The patient was managed under the massive transfusion protocol and received 5 units of packed red blood cells, 5 units of fresh frozen plasma, and additional hemostatic support. Despite transfusion, active bleeding persisted. CT angiography confirmed subcapsular hematoma measuring 5.2 × 2.4 × 5.6 cm. Two sites in the liver were embolized successfully by the interventional radiologist. She was then admitted to the ICU postoperatively for further monitoring. She was extubated on day 6 post-op, and her discharge on day 16 was uneventful.

Discussion and Conclusion:

The probable mechanism of SLH in HELLP syndrome may be attributed to fibrin deposition and platelet activation, both of which lead to clot formation and subsequent occlusion of capillaries supplying the liver. Consequently, hepatic necrosis ensues, and hemorrhage occurs. Prompt recognition and treatment are crucial to optimizing the patient's outcome. Management can be either conservative or surgical, depending on various factors.

Keywords:

Subcapsular liver hematoma (SLH) hemolysis, elevated liver enzymes, low platelets (HELLP) syndrome.