Anesthetic Management of Spontaneous Hepatic Rupture in HELLP Syndrome

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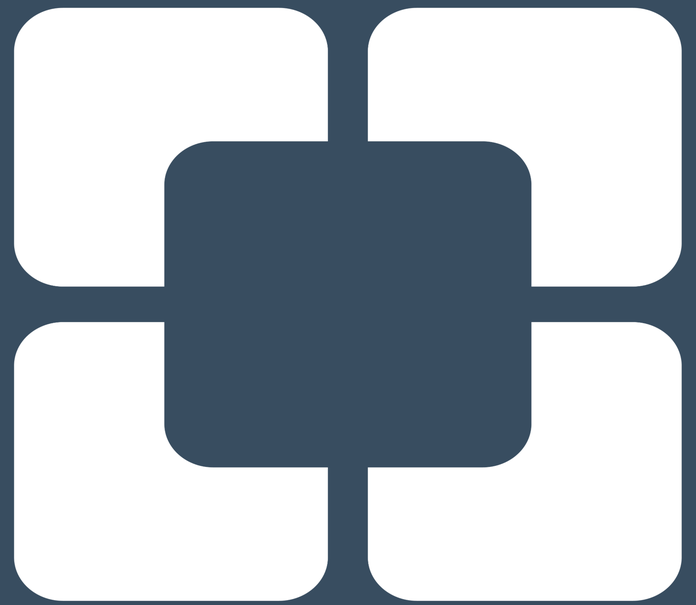

Background

- Spontaneous hepatic rupture is a rare but life-threatening complication, occurring in:
  - 0.5-2% of preeclampsia cases[1]
  - ~1 in 2000 cases of HELLP syndrome[1]

- Cited mortality varies (8-50%)[1, 2]

- Hepatic hemorrhage and capsular disruption may present with epigastric or right upper quadrant pain, anemia, pyrexia, and hemodynamic instability[1]

1. Rahim MN et al. Pregnancy and the Liver. Lancet. 2025.
2. Joshi D et al. Liver disease in pregnancy. Lancet. 2010.

Case

Outside hospital ED:

- 30-year-old woman,G4P1, at 25w4d, history of preeclampsia
- 5 days of progressive epigastric and chest pain, dyspnea, and DFM
- On arrival at ED: BP 198/81 mmHg, plt 55k, LFTs High
  - IV hydral + mag for presumed HELLP
- Sudden onset hypotension & fetal Bradycardia → epi bolus & norepi infusion
  - POCUS showed normal cardiac function w/o intraabdominal abnormality, absent fetal cardiac activity
- Brief tonic seizure c/f eclampsia while awaiting transfer

URGENT AIR TRANSFER

Hospital course:

- Directly to OR for cesarean delivery with presumption of concealed placental abruption + hemorrhagic shock
- Hgb 6.9g/dL, plt 67k
- Induction, Intubation, A line, CVL
  - MTP initiated, vasopressor support (norepi + vasopressin)
- Unexpected massive intraabdominal hemorrhage → conversion to exploratory laparotomy
  - 8×12 cm hepatic rupture
  - Hemostasis with topical agents and abdomen left open with ABTHERA
- EBL 7L; received 15 IU PRBC, 6 IU Plt, 12 IU FFP, 5 IU Cryo
- Transfer to ICU; subsequent definitive closure of abdomen; Discharge on POD9

Learning Points

- Epigastric or right upper quadrant pain in pre-eclampsia requires urgent evaluation[2]
- Limited sensitivity of US for hepatic complications, CT or MRI is essential[2]
- Hematomas may be managed conservatively if not ruptured[2]
- Treatment may include: arterial embolization, hepatic artery ligation, or liver resection[2]
- Early hemodynamic stabilization, prompt imaging, and multidisciplinary management are critical for survival

2. Joshi D et al. Liver disease in pregnancy. Lancet. 2010.