



School of Medicine

# Subcapsular Hepatic Hematoma: A Rare Complication of Hemolysis, Elevated Liver Enzymes, and Low Platelet Count (HELLP) Syndrome in Pregnancy

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## INTRODUCTION

- Hemolysis, elevated liver enzymes, and low platelet count (HELLP) syndrome is seen in 0.1-1.0% of pregnant people overall, with the risk increased by preeclampsia.
- Common complications of HELLP include bleeding, disseminated intravascular coagulation (DIC), and abruptio placentae. Here we present a rare case of subcapsular liver hematoma that occurs in only 1% of HELLP patients

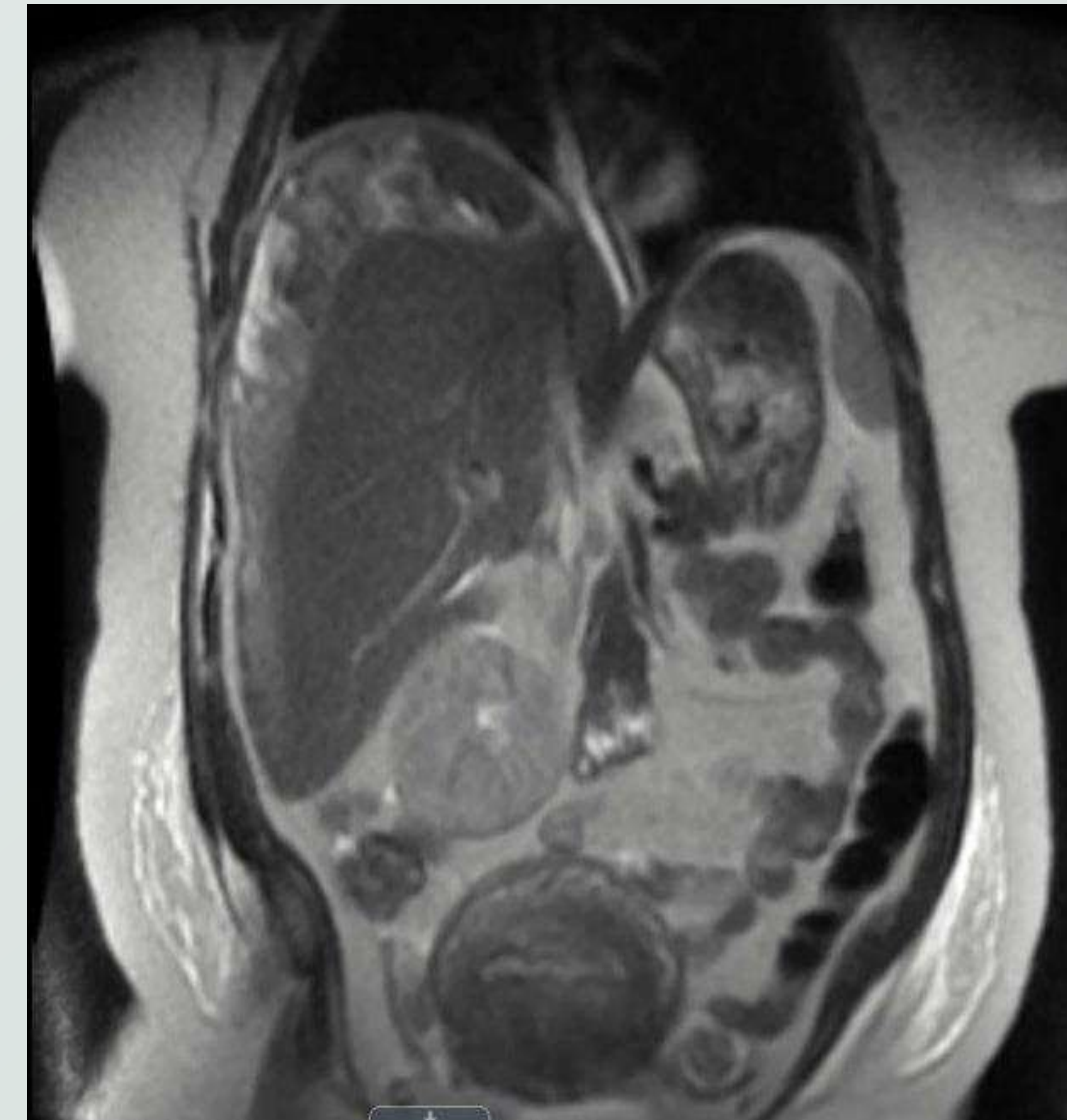
## CASE DESCRIPTION

- A 29-year-old woman, gravida 4, para 3 with PMH of preeclampsia during prior pregnancies presents with acute onset epigastric and pelvic pain for 1 day at 27th-week gestation.
- The severe, intermittent epigastric pain radiates laterally down to the pelvis and is aggravated with laying down.
- **The review of systems:** Normal.
- **Physical exam:**
  - Normal vitals,
  - Mild tenderness in the right upper quadrant with a negative Murphy's sign.

## HOSPITAL COURSE (DIAGNOSTIC WORKUP)

- **Labs:** High ALT 233 U/L, AST 378 U/L, low platelet 108,000/microL, and high LDH 519 IU/L. The rest of the labs were normal.
- She underwent an emergent C-section at admission for HELLP syndrome.
- However, pain continued to worsen with a drop in hemoglobin from 12.8 gm/dl at admission to 7.1 gm/dl on day 4.
- **Imaging:**
  - Ultrasound showed two complex hypoechoic hepatic mass-like areas measuring 9.3cm and 3.5 cm in the setting of hepatomegaly and diffuse hepatic steatosis suggestive of focal fatty sparing or cavernous hemangioma. Biliary sludge without cholecystitis or cholelithiasis was also noted.
  - An MRI with IV contrast with the liver mass protocol was obtained which showed hepatic subcapsular hematoma of dimensions 24 cm x 9.2 cm x 3.9 cm at the level of the right hepatic lobe.
  - CT angiography of the abdomen and pelvis with and without arterial/venous phase showed a similar appearing subcapsular hematoma without an active bleed.

## IMAGING



A. Coronal section of MRI with IV contrast (Liver mass protocol) of the abdomen and pelvis demonstrates subcapsular hepatic hematoma involving the hepatic dome and right hepatic lobe approximately measuring 24 cm in craniocaudal dimension

## HOSPITAL COURSE (TREATMENT)

- IR consulted.
- Underwent image-guided hepatic angiography that showed a large perihepatic hematoma along the right lateral abdominal wall without active contrast extravasation.
- Right hepatic artery embolization was done with a reduction in peripheral hepatic arterial blood flow by 25%.
- Later hemoglobin stabilized, and liver enzymes improved. The patient was discharged home 6 days later in a clinically stable state.

## DISCUSSION

- Early diagnosis of subcapsular hematoma is challenging due to nonspecific signs and symptoms but crucial for improved outcomes.
- Physicians should evaluate for a subcapsular hematoma in patients with HELLP and RUQ pain or hypotension.
- Therapeutic options for ruptured hematomas include laparotomy and hepatic artery embolization.