A Case of Uterine Rupture in a Patient with Sickle Cell Disease

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Introduction

- Uterine rupture is a rare but catastrophic obstetric emergency
- May present with severe abdominal pain and rapidly progress to fetal compromise (1)
- In sickle cell disease (SCD), labor can precipitate vaso-occlusive events, complicating diagnosis, resuscitation, and anesthetic management of rupture (2)

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Case Presentation

Overview: 25-year-old G2P1 with a history of SCD requiring transfusions, prior cerebrovascular accident, prior cardiomyopathy, and prior cesarean delivery presented at 35w5d with lower extremity pain and edema

Hospital Day 1

- Labs: Hb 6, BNP 115, haptoglobin <10mg/dL
- TTE: LVH, preserved systolic function
- Admitted for pain management and prenatal care

Hospital Day 2-3

- Hematology, cardiology, maternal-fetal medicine consults
- Serial complete blood and reticulocyte counts
- Transfusions and diuresis
- Daily fetal monitoring

Hospital Day 4

- Developed severe abdominal pain
- US, fetal monitoring, pelvic exam, labs unchanged
- Initial diagnosis sickle cell crisis
- Started PCA, oxygen

Hospital Day 5

- Pain unchanged, contractions start
- CTA negative
- Proceeded to C-section:
- CSE placed-> fetal bradycardia
- Emergent delivery revealed 3cm uterine rupture
- EBL 1500-> 4U RBC, TXA, CA

Hospital Day 6-9

- Post-op pain control with PCEA, Tylenol, ibuprofen
- Epidural discontinued on POD3
- Discharged POD4

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Discussion and Key Points

- Uterine rupture may be clinically occult and evade initial imaging despite severe abdominal pain, necessitating vigilance particularly in patients with pre-existing pain disorders (1,2)

- In patients with SCD, anticipatory multidisciplinary planning, early blood product readiness, and careful coordination of analgesia and resuscitation are essential, given the frequency of pain, anemia and sickling-related complications in SCD pregnancies (2)

References

1. Rottenstreich M, Rotem R, Hirsch A, et al. Delayed diagnosis of intrapartum uterine rupture - maternal and neonatal consequences. J Matern Fetal Neonatal Med. 2021;34(5):708-713.
2. Obadina MA, Pecker LH. Proactive management to improve outcomes of high-risk pregnancy in people with sickle cell disease. Hematology Am Soc Hematol Educ Program. 2025;2025(1):511-522.