



Second Trimester Uterine Rupture in a Class 3b Placenta Accreta Spectrum

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Background

- Uterine rupture is a true obstetric emergency requiring prompt diagnosis and management.
- Characterized by rapid maternal-fetal compromise from tearing of the uterine wall from the endometrium to the perimetrium
- Placenta accreta spectrum (PAS) confers a risk for corresponding uterine rupture
- PAS with corresponding uterine rupture is a true obstetric emergency that requires anticipatory planning

Clinical Presentation

A 31-year-old G4P2103 at 23 weeks with a past medical history of asthma, tobacco use, and GERD was admitted for vaginal bleeding in the setting of placenta previa.

Past Medical History

- Asthma
- GERD
- Prior spontaneous vaginal delivery complicated by preeclampsia
- Prior preterm cesarean delivery at 25 weeks secondary to cervical incompetence and abruption
- Two subsequent cesarean deliveries

Her admission evaluation included screening pelvic magnetic resonance imaging (MRI) and transvaginal ultrasound

Results: *bulging of the placenta and increased signal suggestive of placenta accreta spectrum grade 3B with adjacent hemorrhage.*



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Clinical Course

- On hospital day three, the patient reported abrupt, brisk vaginal bleeding
- Bleeding approximated 1.3 liters of blood loss prompting the decision for emergent operative management.
- Surgical intervention: exploratory laparotomy, supracervical cesarean hysterectomy, and bilateral salpingectomy.
- Diagnosis: **Placenta percreta** and **uterine rupture** identified under direct visualization at laparotomy.

Clinical Course

- Operative management under general endotracheal anesthesia included management of an estimated blood loss approximating 5900 ml
- Resuscitative efforts with blood products and Tranexamic Acid
- The newborn was emergently delivered and admitted to the neonatal intensive care unit for continued management.
- Postoperative recovery course was uncomplicated allowing for hospital discharge on postoperative day four.



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Figure 1: Uterine Rupture with Placenta Percreta

References:
Al-Zirgi I, et al. Risk factors for complete uterine rupture. Am J Obstet Gynecol. 2010; 216:165, e1-8
Eller AG et al Maternal Morbidity in cases of placenta accreta managed by a multidisciplinary care team compared with standard obstetric care. Obstet Gynecol. 2011; 117:331-337
Hobson, S et al. No. 383-Screening, Diagnosis, and Management of Placenta Accreta Spectrum Disorders. Jour. of Obst.and Gyn Canada, Volume 41, Issue 7, July 2019, Pages 1050-1066

Discussion

- As the rate of cesarean deliveries and uterine surgeries continue to increase, placenta accreta spectrum (PAS) disorders have become a more prevalent disease, requiring prompt recognition and management.
- Early diagnosis of PAS with imaging modalities allows for the prevention of maternal morbidity and mortality associated with maternal hemorrhage.
- Risk stratification and vigilant surveillance after diagnosis are critical in avoiding complications from maternal hemorrhage.
- PAS with corresponding uterine rupture is a true obstetric emergency that requires anticipatory planning.***
- Uterine rupture in the setting of PAS reflects the importance of recognizing the positive correlation of incidence in both placenta accreta and uterine rupture related to previous cesarean