

Minimizing Maternal and Fetal Morbidity in the Setting of Rapidly Evolving Placenta Percreta: A Multidisciplinary Approach

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Introduction:

Placenta accreta spectrum (PAS) is the range of pathologic adherence of the placenta to the myometrial layer of the uterine wall, and includes, in order of severity: placenta accreta, placenta increta, and placenta percreta. PAS can lead to potentially life-threatening perioperative hemorrhage.¹ The incidence rate of placenta accreta has been increasing over the past four decades, from 1 in 2510 in 1970 to 1 in 271 in 2011.^{2,3}

Case:

37yo-F G3P1011 at 24w5d gestation, complete placenta previa possible placenta accreta on initial ultrasound

- PMH: None
- OB History: G1 SAB and G2 primary C-section at term for breech

Multidisciplinary approach to care:

Weekly multidisciplinary meetings between Gyn-Onc, NICU, MFM, Nursing and OB Anesthesiology teams

Accreta checklist

Initially scheduled for combined C-section and hysterectomy at 34w0d gestation

Recurrent episodes vaginal bleeding. Repeat imaging - placenta percreta with endocervical and posterior uterine wall invasion on MRI

Atypical rapid progression at early gestational age, delivery moved up to 28w5d gestation in effort to balance risk/benefit for maternal morbidity, fetal lung maturity/morbidity and availability of all teams

Surgery proceeded as scheduled

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Case (Cont.):

Intraoperative Management:

Pre-induction arterial and central lines

General endotracheal anesthesia with rapid sequence intubation

Findings: Placenta percreta involving right bladder wall

Surgical team left placenta intact and isolated tissues before performing total hysterectomy with removal of cervix, bladder wall resected en bloc to minimize blood loss

Intravascular monitoring with TTE POCUS PSAV LV volume for goal-directed fluid therapy

Received 8U pRBC, 8U FFP, 1U platelet, 1 cryo for EBL of 3.2 L, Belmont Rapid Infuser kept hemodynamics stable throughout.

No vasopressor infusion required.

APGAR scores: 2/6/7

Post-op hemodynamically stable, labs within normal

Discharged home on POD#5

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Conclusion:

- Increased risk of placenta accreta spectrum and percreta in setting of placenta previa and prior cesarean.⁴
 - 11% previa + 1 prior cesarean
- Case unique in very rapid progression from accreta to percreta at an early gestational age.
- MRI and Ultrasound have comparable sensitivity for diagnosis of accreta, 94.4% and 90.7%, respectively.⁵
MRI can assist in diagnostic work-up if Ultrasound is equivocal, or to help plan Cesarean + hysterectomy
- Early planning and multidisciplinary approach to patient care important in minimizing maternal and fetal morbidity in parturients with placenta percreta.⁶
- Using POCUS to guide goal directed fluid therapy can be very helpful.

References:

1. ACOG & Society for Maternal-Fetal Medicine (2018). Obstetric Care Consensus No. 7: Placenta Accreta Spectrum. *Obstet Gynecol* 132:e259-e275.
2. Wu S , Kocherginsky M , Hibbard JU . Abnormal placentation: twenty-year analysis . *Am J Obstet Gynecol* 2005 ; 192 : 1458 – 61.
3. Mogos MF , Salemi JL , Ashley M , Whiteman VE , Salihu HM . Recent trends in placenta accreta in the United States and its impact on maternal-fetal morbidity and healthcare-associated costs, 1998-2011 . *J Matern Fetal Neonatal Med* 2016 ; 29 : 1077 – 82
4. Silver. *Obstet Gynecol* 2006;107:1226
5. Kilcoyne. *Am J Radiol* 2017;208:214–221.
6. CMQCC Hemorrhage Toolkit v2 2017. CMQCC.org.