Intraoperative Decompensation with Placenta Percreta Requiring Aortic Compression and Emergent Conversion to General Anesthesia: A Case Report

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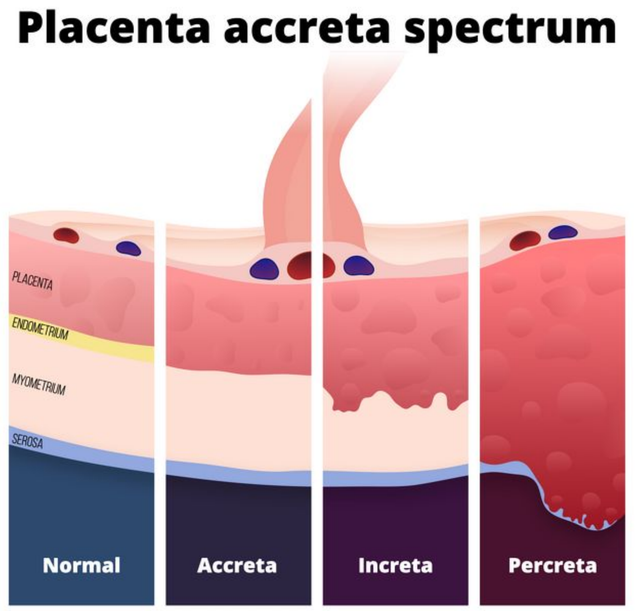
INTRODUCTION

- Placenta accreta spectrum (PAS) is a serious obstetric complication where the placenta adheres to or invades the uterine wall, preventing its normal separation after delivery.
- The incidence of placenta accreta ranges from 0.79-3.11 per 1000 births for individuals with prior cesarean section.[1]
- Placenta percreta, the most severe form of PAS, involves complete invasion through the uterine myometrium and possible extension into surrounding organs such as the bladder or bowel.
- All forms of PAS have a risk of peripartum hemorrhage, with an average blood loss of 2000-5000 mL, and maternal and neonatal morbidity and mortality.[2,3]



1 **Jauniaux E et al**. FIGO consensus guidelines on placenta accreta spectrum disorders: Epidemiology. *Int J Gynaecol Obstet* 2018; 140:265-273
2 **Belfort MA**. Placenta accreta. *Am J Obstet Gynecol* 2010; 203:430-439
3 **Matsuzaki S et al**. Trends, characteristics, and outcomes of placenta accreta spectrum: a national study in the United States. *Am J Obstet Gynecol* 2021; 225:534.e1-534.e38.
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CASE PRESENTATION

- A 33-year-old G4P2103 with placenta previa and suspected PAS presented at 34 weeks for a repeat classical cesarean section, bilateral salpingectomy, cystoscopy, and possible hysterectomy.
- Past medical history was significant for multiparity, a classical cesarean section with myomectomy, and preeclampsia in two prior pregnancies.
- Following admission to the hospital:
  - Coagulation studies and hemoglobin were stable. Preoperative H/H was 9.6/29.5.
  - Patient was diagnosed with preeclampsia.

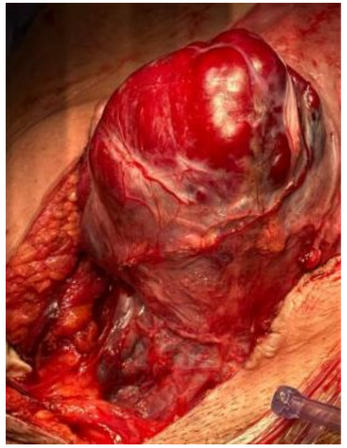

Fig. 1. Upon laparotomy, placenta was found to have completely invaded the uterine wall, with tense and bulging vessels in the midline of the uterus. Additional tortuous vessels extended inferiorly toward the bladder.

PREOPERATIVE PREPARATIONS

- A combined spinal-epidural with 1.6 mL of 0.75% bupivacaine, 150 mcg morphine, and 15 mcg fentanyl was performed.
- A 20G **arterial line was placed for continuous BP monitoring and blood sampling, along with two 16G peripheral IVs to prepare for conversion to general anesthesia.**
- After discussion with the obstetrics team and blood bank, **a cell saver setup, Belmont rapid infuser, and blood products were made readily available in the OR.**

PROCEDURE

- Cystoscopy showed no evidence of placental invasion into the bladder.
- Following an uncomplicated delivery, **a ruptured placenta percreta was found** (Fig. 1).
- Patient acutely decompensated secondary to hemorrhage, with an EBL of 1500 mL within 2 minutes, and patient endorsed severe, sharp pain.
- **Manual aortic compression was performed** by the obstetrics team for approximately 13 minutes until the uterine arteries were secured.
- **Patient received 2 units of packed RBCs and 1 unit of FFP and was rapidly converted to general anesthesia** with 200 mg propofol, 20 mg ketamine, and 100 mg succinylcholine.
- **The remainder of the procedure was well tolerated.** Patient was extubated without complications.
- Postoperative H/H was 9.1/27.4. Patient remained hemodynamically stable throughout the postoperative period.
- Patient was discharged on POD#4.

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DISCUSSION

- This case presents a way anesthetic management can be optimized when PAS is suspected.
- Consistent with prior studies, we recommend preoperative preparations to include placement of an arterial line and peripheral IVs, cell saver setup, and communication with the blood bank.[4]
- Delivery of the baby can be tolerated under regional anesthesia, followed by rapid conversion to general anesthesia for the remainder of the procedure.
- Multidisciplinary coordination is essential to mitigate the risks of PAS.

4 **Snegovskikh D et al**. Anesthetic management of patients with placenta accreta and resuscitation strategies for associated massive hemorrhage. *Curr Opin Anaesthesio*l 2011; 24:274–281
Storyset. (n.d.). Surgery anesthesia concept illustration [Vector illustration].

CONCLUSIONS

Peripartum hemorrhage following cesarean delivery, particularly in the setting of PAS, remains a leading cause of maternal morbidity and mortality. In this case, despite a lower-than-average EBL, the patient experienced acute decompensation requiring emergent interventions. This case report highlights how thorough planning is beneficial in the setting of unpredictable complications of PAS.