

Article

Placenta Percreta With Bladder Involvement

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SUBMISSION TRACK

Received: March 28, 2024
Final Revision: May 03, 2024
Available Online: May 30, 2024

KEYWORDS

Placenta Accreta Spectrum
Placenta Percreta
Bladder Involvement
Ureteral Catheterization

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A B S T R A C T

Placenta accreta spectrum (PAS) is characterized by abnormal placental invasion due to incomplete or complete loss of decidua. PAS subtypes are classified based on the depth of invasion: placenta accreta, increta, and percreta. Placenta percreta is the most severe form of placenta accreta and is characterized by invasion of the placenta through the entire myometrium reaching up to the uterine serosa. The increasing rate of placenta accrete because of increased rate of cesarean delivery. Urological complications are relatively rare in placenta accreta spectrum (PAS), but can be severe. Treatment planning must always involve a multidisciplinary team. Placenta percreta is a very high-risk obstetric condition associated with morbidity and mortality. A 32-year-old woman referred from Maternal Fetal Medicine Polyclinic with G4P2A1L2 37-38 weeks of term pregnancy + total placenta previa suspected percreta PAS 2 grade 3B S2 + once previous CS, and a CCS hysterectomy was planned. PAS with bladder involvement was significantly correlated with massive surgical blood loss. Prenatally, the disorder was predicted with high specificity by the combination of loss of chemical shift artifacts in the steady-state free precession sequence and abnormal vascularization at the uterovesical interface on USG (Ultrasonography).

I. INTRODUCTION

Placenta accreta spectrum (PAS) is characterized by abnormal placental invasion due to incomplete or complete loss of decidua. PAS subtypes are classified based on the depth of invasion: placenta accreta invades the endometrium and adheres to the myometrium, placenta increta invades the myometrium, and placenta percreta invades through the uterine wall (serosa), often invading adjacent structures, most commonly the bladder.¹ Placenta percreta is the most severe form of placenta accreta and is characterized by invasion of the placenta through the entire myometrium reaching up to the uterine serosa, and may involve the adjacent structures.^{2,3} Based on estimates the incidence of PAS may be increasing, now occurring in 0.17% (1 in 588) of pregnancies. The increasing rate of placenta accreta is most likely due to changes in risk factors, especially the increased rate of cesarean delivery.⁴ Urologic complications of PAS include inadvertent cystotomy during hysterectomy.⁵ To our knowledge, this is the case to report the simultaneous combination of ureteral catheterization and Classic Cesarean Section hysterectomy. We report a series of seven cases of placenta percreta managed successfully at our institute. The aim was to identify an optimum management option to improve maternal outcomes in patients with placenta percreta based on the available literature.

II. CASE ILLUSTRATION

A 32-year-old woman referred from Maternal Fetal Medicine Polyclinic with G4P2A1L2 37-38 weeks of term pregnancy + total placenta previa suspected percreta PAS 2 grade 3B S2 + once previous CS, and a CCS hysterectomy was planned. On ultrasound examination, 37-38 weeks of pregnancy according to biometry. Fetal alive, singleton, intrauterine, head presentation. The placenta is implanted in the anterior corpus. They are bridging vessel (+), rail sign (+), placental bulge (+), lacuna (+), large swiss sign (-), halozone (-), and uterovesical hypervascularization (+). During a laboratory examination (8th August 2023, at 12.27 p.m.), Hemoglobin levels were found to be 11.9 g/dL, Leukocytes 13,060/mm³, and Platelets 296,000/mm³. Early urology consultation and surgical assistance will decrease the incidence and/or rate of urinary tract complications during surgical management of placenta percreta with bladder involvement. Therefore, we will consult the urology department for preoperative ureteral catheter placement. Before the operation started, we had prepared 2 PRC units and a place in the ICU when the operation was finished. She was therefore taken to the operating room. After induction of spinal anesthesia and placement of a central line, cystoscopy was performed, and ureteral catheters were placed. There was no gross placental invasion noted in the bladder. After a cesarian section was performed and the baby was delivered, the subsequent hysterectomy was not complicated.

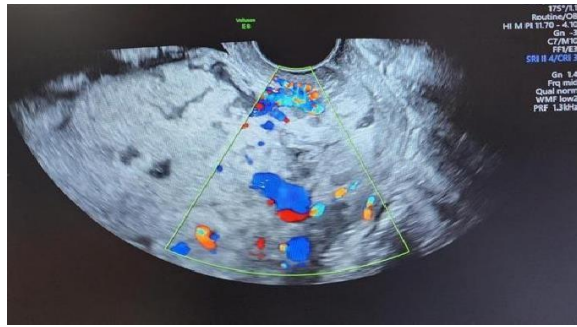


Figure 1. Transvaginal Ultrasound: The placenta implanted in the anteriorcorpus extends to cover the OUI, lacuna (+)

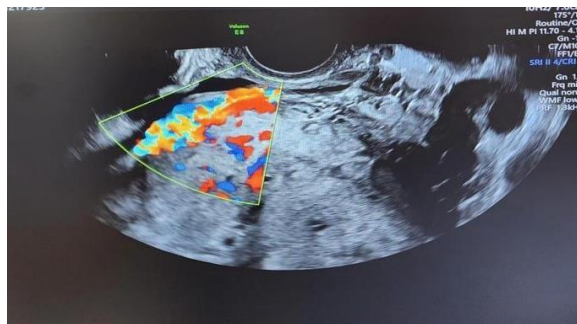


Figure 2. Transvaginal Ultrasound: The placenta implanted in the anteriorcorpus extends to cover the OUI, bridging vessels (+), rail sign (+), halozone (-), placental bulge (+), uterovesical hypervascularitation (+). PAS 2 grade 3B S2.

III. DISCUSSION

We present a particularly devastating case of a 32-year-old woman who suffered severe morbidity related to PAS with invasion of the urinary bladder. This report is limited by the lack of information around the patient’s loss to follow-up as well as lack of long-term outcomes on her the quality of life. Placenta percreta is the most severe and least common form of placenta accreta (5–7% of cases), however, the incidence is currently increasing rates of cesarean deliveries. The most common urologic injury in PAS surgery is cystotomy. Interestingly, the International Federation of Gynecology and Obstetrics (FIGO) guidelines recommend intentional cystotomy in placenta percreta with invasion of the urinary bladder because it exposes the extent of the placental invasion, defines dissection planes, and determination of whether resection at the posterior bladder wall is needed. Maximal bladder preservation is important in the surgical management of PAS with bladder invasion. Prior to dissection of the vesicouterine plane, filling the bladder with saline allows better visualization of the border between the bladder and uterus.^{6,7} Cesarean hysterectomy in cases of placenta percreta is associated with high rates of severe maternal morbidity (40–50%) and mortality

(7%).⁷ Placenta percreta is idiopathic but associated with a previous history of cesarean section, placenta previa, multiparity, curettage, and Asherman syndrome. Currently, cesarean hysterectomy immediately after childbirth is the gold standard treatment.² In FIGO 3B or 3C or PAS Grade 3E, some experts believe that hysterectomy reduces the risk of the worst outcome.⁴ Urological complications are relatively rare in the placenta accreta spectrum (PAS), but can be severe. In PAS, treatment planning must always involve a multidisciplinary team consisting of experienced obstetricians, maternal and fetal medicine specialists, radiologists, neonatologists, anesthesiologists, and urologists. Some institutions may consider options for vascular control, such as uterine arterial embolization, uterine artery or iliac internal artery ligation, or endovascular balloon occlusion of the aorta. Institutions may even elect to leave the placenta in situ to prevent massive blood loss and reduce patient morbidity.⁸

IV. CONCLUSION

PAS causes serious urological complications if it invades the bladder. Placenta percreta is a very high-risk obstetric condition and is often associated with significant maternal morbidity and mortality. Placenta percreta if not treated in a planned manner, can cause adverse effects on maternal outcomes. Women with placenta percreta are known to have high rates of bleeding, infection, and ICU admission despite treatment at a tertiary center.

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