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Case Report

Placenta percreta with bladder involvement: a case report at a tertiary care centre

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ABSTRACT

Placenta accreta spectrum (PAS), encompassing placenta accreta, increta, and percreta, represents one of the most severe and life-threatening obstetric conditions. The rising incidence of Placenta Accreta Spectrum parallels the increasing rates of caesarean delivery. Caesarean hysterectomy with the placenta left *in situ* remains the standard management strategy for placenta percreta; however, even in tertiary care settings, it is associated with significant maternal morbidity. Early antenatal diagnosis facilitates planned delivery and multidisciplinary management, thereby improving maternal outcomes. We report a case of placenta percreta managed at a tertiary care centre, highlighting intraoperative challenges, postoperative complications, and adherence to FOGSI-recommended management protocols.

Keywords: Placenta accreta spectrum, Placenta percreta, Caesarean hysterectomy, Antenatal diagnosis, Multidisciplinary management

INTRODUCTION

Placenta accreta spectrum (PAS) refers to abnormal placental adherence resulting from partial or complete absence of the decidua basalis, leading to pathological invasion of chorionic villi into the myometrium. Depending on the depth of invasion, PAS is classified as placenta accreta, increta, or percreta. Placenta percreta represents the most severe form, characterized by placental penetration through the uterine serosa with possible involvement of adjacent organs, most commonly the urinary bladder. PAS is associated with massive obstetric haemorrhage, surgical complications, and increased maternal morbidity and mortality.¹⁻³

CASE REPORT

A 36-week pregnant woman, gravida 3 para 2 live 2, with a history of two previous caesarean sections, presented with painless vaginal bleeding of three hours' duration. She was a booked case with regular antenatal care.

Ultrasonography performed at 32+3 weeks revealed a single live intrauterine fetus with a low-lying anterior grade III placenta and increased placental vascularity extending towards the bladder wall (Figure 1).

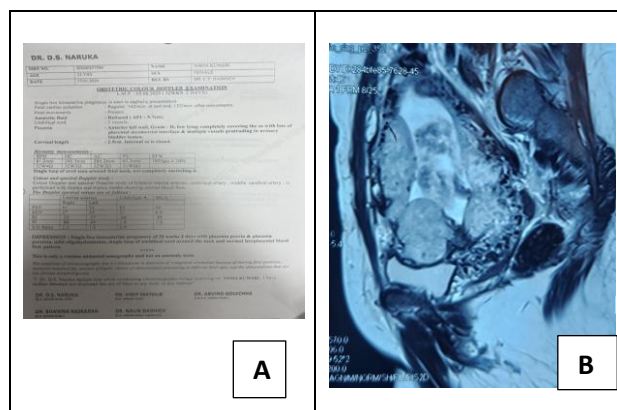


Figure 1: a) USG and b) MRI findings

Before the scheduled procedure, she developed sudden-onset painless vaginal bleeding and was admitted as an emergency. On examination, her pulse rate was 113/min and blood pressure was 100/80 mmHg. Cardiotocography demonstrated fetal heart rate decelerations. After resuscitation and arrangement of blood products, an emergency caesarean section was undertaken following informed consent.

Intraoperative Findings

A midline vertical incision was made. The lower uterine segment was completely covered by placenta with marked thinning at the site of the previous caesarean scar (Figure 2). Stepwise devascularization was performed. A classical caesarean section was undertaken, and a live male infant was delivered.

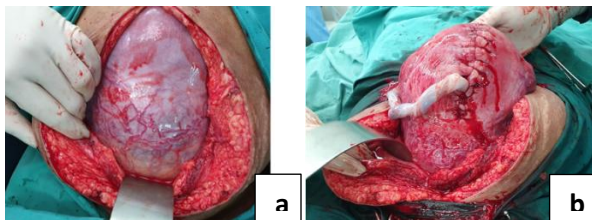


Figure 2 (a and b): Intra OP findings

The placenta could not be separated and was therefore left in situ (Figure 3). Persistent bleeding and placental invasion up to the serosa confirmed the diagnosis of placenta percreta. Emergency obstetric hysterectomy was performed with bilateral internal iliac artery ligation after identification and lateralization of the ureters. The specimen was sent for histopathological examination.

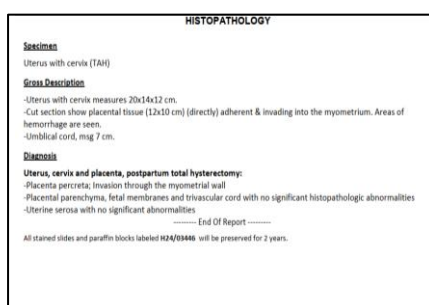
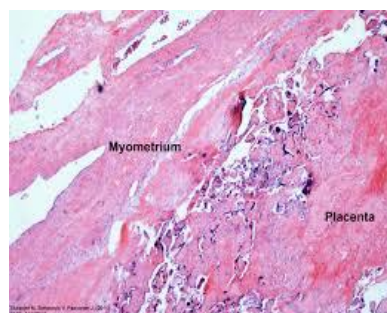


Figure 3: Histopathology

Postoperative course

The patient was managed in the intensive care unit and received two units of packed red blood cells and four units of fresh frozen plasma. Drains and urinary catheter were removed on postoperative day four, and she was discharged on postoperative day five in stable condition. Histopathological examination confirmed placenta percreta (Figures 3).

Follow-up

On postoperative day 21, the patient presented with continuous urinary leakage. Imaging revealed a 1-cm vesicovaginal fistula. Conservative management failed, and she subsequently underwent successful laparoscopic vesicovaginal fistula repair after three months (Figures 4 a-f).

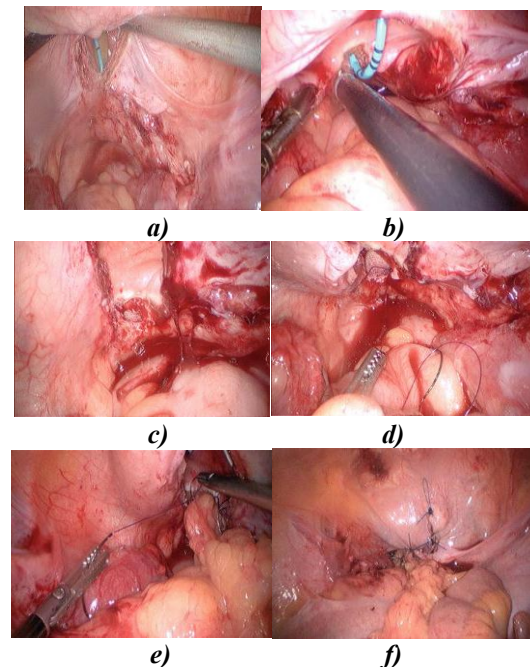


Figure 4: Images for fistula repair
(a) Cystotomy; (b) separation of bladder with VVF; (c) excision of fistulus tract (d and e) closure of vaginal cuff and (f) omental graft apposition.

DISCUSSION

Placenta accreta spectrum is a serious obstetric complication resulting from defective decidualization at the implantation site, allowing abnormal adherence and invasion of placental villi into the uterine wall.¹ The incidence of PAS has increased steadily over recent decades, rising from approximately 0.12% to nearly 0.31%, closely paralleling the rising caesarean section rates.²

Previous caesarean delivery remains the most significant risk factor for PAS, particularly when associated with placenta previa. The risk increases progressively with each

additional caesarean section.³ Other contributing factors include multiparity, previous uterine surgeries such as dilatation and curettage or myomectomy, advanced maternal age, infertility, and assisted reproductive techniques.⁴

Early antenatal diagnosis plays a pivotal role in improving maternal outcomes. Ultrasonography with colour Doppler is the primary diagnostic modality, with reported high sensitivity and specificity.⁵⁻⁷ Magnetic resonance imaging serves as a useful adjunct in selected cases, particularly when posterior placenta or bladder involvement is suspected.⁸

Features of placenta accrete/percreta on ultrasound and MRI.

Grayscale ultrasound- Loss of the “hypoechoic area” under the placental bed; Irregularity and attenuation of the uterovesical interface; Reduced retroplacental myometrial thickness (<1 mm); Placental bulge; Exophytic masses reaching the uterine serosa; Placental lacunae

Color doppler: Uterovesical hypervascularization (diffuse or focal intraparenchymal flows); Subplacental hypervascularization (prominent venous complex); Communicating vessels between placenta and bladder (bridging vessels); Communicating vessels with placental lacunae (high-velocity vessels with turbulent lacunar flow);

Power Doppler 3D: Intraplacental hypervascularity on 3D power Doppler.

MRI Findings- intraplacental dark bands;myometrial thinning;uterine placental bulge; bladder wall interruption.

FOGSI recommends a standardized, protocol-based multidisciplinary approach for managing PAS, involving experienced obstetricians, obstetric anaesthesiologists, urologists, interventional radiologists where available, intensivists, neonatologists, and a well-equipped blood bank.¹⁰ Planned caesarean hysterectomy with the placenta left in situ remains the definitive management for placenta percreta. Conservative approaches, including leaving the placenta in situ or adjuvant medical therapy, may be considered only in highly selected cases and are associated with significant risks, necessitating prolonged follow-up.⁹

CONCLUSION

Placenta percreta is a rare but life-threatening obstetric condition, most commonly associated with previous caesarean section scars. Early antenatal diagnosis using

detailed ultrasonography enables timely referral and planned intervention, thereby reducing maternal morbidity and mortality. Management should be individualized based on the extent of placental invasion, maternal clinical status, and available expertise. A multidisciplinary, protocol-based approach at a tertiary care centre remains the cornerstone of optimal management, in accordance with FOGSI clinical practice guidelines.

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REFERENCES

1. Jauniaux E, Ayres-de-Campos D; FIGO Placenta Accreta Diagnosis and Management Expert Consensus Panel. FIGO consensus guidelines on placenta accreta spectrum disorders: epidemiology. Int J Gynaecol Obstet. 2018;140(3):265-73.
2. Silver RM, Landon MB, Rouse DJ, et al. Maternal morbidity associated with multiple repeat caesarean deliveries. Obstet Gynecol. 2006;107(6):1226-32.
3. Bowman ZS, Eller AG, Bardsley TR, Greene T, Varner MW, Silver RM. Risk factors for placenta accreta: a large prospective cohort. Am J Perinatol. 2014;31(9):799-804.
4. Belfort MA. Placenta accreta. Am J Obstet Gynecol. 2010;203(5):430-9.
5. Comstock CH. Antenatal diagnosis of placenta accreta: a review. Ultrasound Obstet Gynecol. 2005;26(1):89-96.
6. D'Antonio F, Iacovella C, Bhide A. Prenatal identification of invasive placentation using ultrasound: systematic review and meta-analysis. Ultrasound Obstet Gynecol. 2013;42(5):509-17.
7. Jauniaux E, Chantraine F, Silver RM, Langhoff-Roos J. FIGO consensus guidelines on placenta accreta spectrum disorders: diagnosis and management. Int J Gynaecol Obstet. 2018;140(3):281-90.
8. Committee on Obstetric Practice. Placenta accreta spectrum. ACOG Obstetric Care Consensus No. 7. Obstet Gynecol. 2018;132(6).
9. Sentilhes L, Ambroselli C, Kayem G, et al. Maternal outcome after conservative treatment of placenta accreta. Obstet Gynecol. 2010;115(3):526-34.
10. Society of Obstetricians and Gynaecologists of India (FOGSI). Good clinical practice recommendations on placenta accreta spectrum. Mumbai: FOGSI.

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