



# Successful Postpartum Outcome of Placenta In Situ in a Case of Placenta Percreta: A Case Study

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## Introduction

Placenta accreta is defined as abnormal trophoblastic invasion of part or whole of placenta into the myometrium. It is caused by defect in the deciduas basalis resulting in abnormally invasive placental implantation. The disruption is often related to previous uterine scars, including caesarean section and uterine curettage. Other risk factors are multiparity, placenta previa, prior intra uterine infections and maternal age over 35 years. PAS, formerly known as morbidly adherent placenta, refers to the range of pathologic adherence of the placenta into the myometrium namely placenta accreta (decidual layer), increta (myometrium), and percreta (serosa and adjacent organs). Maternal morbidity and mortality can occur because of severe and sometimes life-threatening haemorrhage, which often requires blood transfusion, mortality is as high as 7%. Severe postpartum haemorrhage may lead to complications such as massive transfusion of blood products, disseminated intravascular coagulation, acute renal failure, infectious morbidities and loss of fertility. Placenta percreta often invades the bladder wall and can be associated with massive adnexal hypervascularisation that makes caesarean section difficult to perform and increases the risk of intraoperative and postoperative complications.

## Case History

A 38-year-old female was referred in our OPD at 24 weeks of gestation for abnormal placentation, diagnosed on a routine USG at a peripheral centre. She had a history of previous two lower segment caesarean section and two abortions. First caesarean section was done 12 years back for foetal distress, the baby died of pulmonary atresia. Second caesarean section was done 5 years back, baby is healthy. She also had two abortions, followed by evacuation, last abortion was 1 year back.

After evaluating this pregnancy, patient was advised MRI, which revealed low lying placenta, grade II with complete myometrial invasion and possibility of placenta percreta and normal foetal parameters. Patient was counselled regarding possible complications and need for regular follow-up. Her routine investigations were normal for pregnancy except mild anaemia which was corrected with iron therapy, further antenatal scans revealed normal growth of foetus with same placental findings. Under steroid cover, she was planned for elective classical caesarean section with bilateral uterine artery embolisation, at 34 weeks of gestation to avoid morbid complications of placenta percreta with advancing gestation.

On the day of surgery, after anaesthesia, bilateral femoral artery catheter placed by interventional cardiologist, classical caesarean section performed and a healthy child of 3.4 Kg delivered. Balloon inflation of internal iliac artery was done and extent of placental spread visualised in a blood less field. Placenta was seen adherent to the lower segment of uterus reaching upto the serosa and placental vessels were found embedded in the bladder wall (Fig. 1). So decision of leaving the placenta in situ was taken and bilateral uterine artery embolisation was done. Uterus closed and tubal ligation was done. Patient was observed in ICU for 24 h.

Postoperatively, she developed pain and numbness in bilateral toes, the lower limb vascular study was done which was normal. She was discharged on day 7 of surgery

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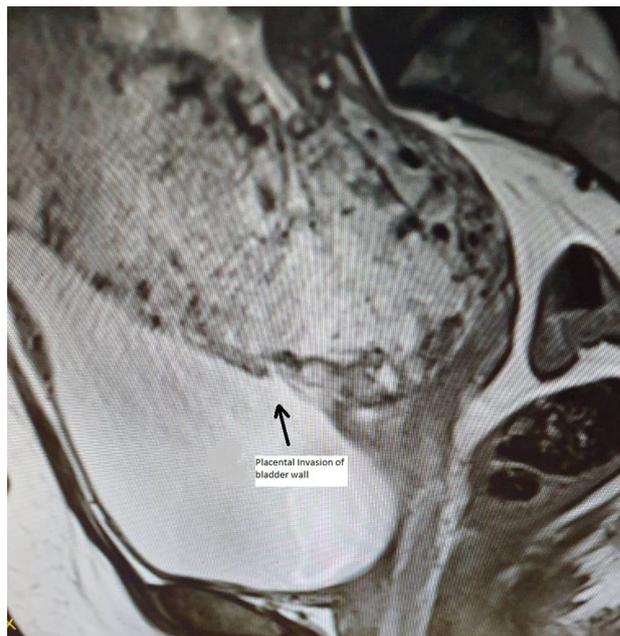


**Fig. 1** Intra-operative LSCS picture

with plan of USG/MRI after 6 weeks for placental details and uterine involution.

On day 12 of surgery (after 5 days of discharge), she came with complains of heaviness in vagina and discharge from stitch line. Vaginal examination was normal, vaginal swab and stitch line discharge was taken for culture and sensitivity which was sterile. On day 15, she complained of difficulty in passing urine and pain in abdomen, was given symptomatic treatment and was advised urine routine analysis with culture and sensitivity. She reported again within 48 h with burning micturation and haemeturia, for which antibiotics were started according to culture report. On day 19, she experienced severe pain in abdomen, dysuria and passage of clots along with urine, USG and MRI was done, which revealed placenta occupying uterus with size of  $5.4 \times 12 \times 15$  cm and tenting of bladder at previous scar site of about 4.5 mm seen suggestive of bladder invasion and blood clots in bladder (Fig. 2). Cystoscopy was done, showing placental tissue invading bladder wall extending upto the left uretral opening (Fig. 3), blood clots were also seen in bladder, same removed, patient was catheterised and sent home.

On day 21 of surgery, patient again came with complaints of haematuria and passage of clots from the side of the catheter with pain and retention of urine. She was admitted and a three way catheter was put and suction irrigation was done for 2 days. Her serum B hCG was sent, which was 642.9 mIU, so parenteral methotrexate was given for total three doses. Patient was counselled to stop breast feeding for 5–7 days and to express milk regularly. Patient was discharged after last dose of methotrexate as she was then asymptomatic with beta hcg of 79.8 mIU. She was advised follow-up after 1 month (after 2 months of surgery), for



**Fig. 2** MRI—urinary bladder invasion of placenta

repeat USG which showed bulky uterus with placenta of  $12 \times 10$  cm size with no appreciable vascularity.

On further follow-up, the placental size reduced to  $10.6 \times 5.9$  cm after 12 weeks and  $5 \times 1.8$  cm after 18 weeks of surgery. In last 1 month, she complained of slight spotting for 2 days only. In between, she also developed pain in bilateral toes, like the one which she developed immediate postoperatively, for which lower limb vascular study was advised which was suggestive of normal vascular flow with incompetent sapheno-femoral junction, for which compression stockings, leg elevation and physiotherapy were advised.



**Fig. 3** Post-operative cystoscopy—urinary bladder invasion of placenta

At the time of reporting the case, i.e., after 22 weeks of surgery, the patient had two normal menstrual cycles with no significant complaints.

## Discussion

Although planned caesarean hysterectomy without attempted removal of the placenta remains the recommended practice, a conservative approach has been developed over the past 20 years, to limit maternal morbidity in women with placenta percreta [1]. The recent International Federation of Gynecology and Obstetrics consensus guidelines recommend leaving the placenta in situ as a suitable conservative option with close follow-up in hospitals with adequate expertise [2]. In a survey on the preference for surgical versus conservative approach in cases of placenta percreta, it was found that when adjacent pelvic organs such as bladder and bowel are involved, majority of members society of perinatal obstetricians, opted for conservative management.

Use of methotrexate has also been proposed to hasten placental resolution. In a women with placenta in situ who are successfully treated with methotrexate, the hCG levels and doppler vascular resistance indices of the uteroplacental arterial circulation decreases faster than those of treatment failure [3].

In a systematic review of interventional radiological procedures, 177 patients of PAS disorder had success rate of 90% with arterial embolisation with need of secondary hysterectomy in only 11.3% [4].

Monitoring of leaving the placenta in situ approach is important, though there are no randomised control trials on pattern of follow-up. The residual villous tissue in the uterine wall may take upto 6 months to completely absorb.

## Conclusion

Placenta accreta spectrum is becoming increasingly common and is associated with significant morbidity and mortality. Preparation for delivery and postpartum care should involve a multidisciplinary team. With this approach, in our case, we could manage to leave the placenta in situ during classical caesarean section and consequently, we could overcome the life-threatening complications of placenta percreta, specially avoiding extensive dissection that can lead to catastrophic and uncontrollable haemorrhage, trauma and bladder morbidities and avoiding hysterectomy. The patient was in close follow-up, and we could ensure a successful postpartum outcome.

## Declarations

**Conflict of interest** The authors declare that there is no conflict of interest.

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