International Journal of Reproduction, Contraception, Obstetrics and Gynecology
Rajeswari KSR et al. Int J Reprod Contracept Obstet Gynecol. 2025 Jan;14(1):234-236
www.ijrcog.org
pISSN 2320-1770 | eISSN 2320-1789

DOI: https://dx.doi.org/10.18203/2320-1770.ijrcog20243957

Case Series

Clinical perspectives on placenta accreta spectrum: a case series

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Received: 01 November 2024
Accepted: 03 December 2024

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ABSTRACT

To describe the presentation and management of three cases of placenta accreta spectrum. Placenta accreta spectrum (PAS), first described in 1937, refers to the pathological invasion of placental trophoblasts into the myometrium and beyond. While a strong association exists between PAS and uterine scarring-often attributed to defective decidualization at the endometrium-myometrium interface-this does not fully explain all cases. Here we report three cases of placenta accreta spectrum disorders, two cases with placenta accreta and one with placenta percreta. Emergency LSCS was performed for two patients with placenta accreta and emergency laparotomy proceeded to subtotal hysterectomy was done for placenta percreta. These patients had a stormy post operative period and required multidisciplinary approach for management. In our study, all three cases experienced spontaneous bleeding far from term and required a high index of suspicion for early diagnosis and effective treatment. With rise in Caesarean sections, placenta accreta spectrum disorders are not uncommon in today's clinical practice. The treatment option should be individualised and hysterectomy is not the only definitive treatment.

Keywords: Placenta previa, Hysterectomy, Uterine artery ligation, Bleeding per vaginum

INTRODUCTION

Placenta accreta spectrum (PAS), first described in 1937, refers to the pathological invasion of placental trophoblasts into the myometrium and beyond.

Earlier known as morbidly adherent placenta, PAS includes three subtypes: accreta (adheres to the myometrium), increta (invades deeply into the myometrium), and percreta (penetrates the uterine serosa and beyond). The exact cause of deep infiltration into the myometrium is not well understood.

While a strong association exists between PAS and uterine scarring, often attributed to defective decidualization at the endometrium-myometrial interface-this does not fully explain all cases, as PAS can occasionally occur during first pregnancy.[1] This report presents three cases of PAS, detailing their progression from diagnosis to delivery.

CASE SERIES

Case 1

A 29-year-old multigravida diagnosed with Placenta Accreta (Figure 1) at 32 weeks of gestation. At 33 weeks and 6 days of gestation, she presented with profuse painless bleeding per vaginum. She was immediately taken up for emergency repeat LSCS with bilateral uterine artery ligation and delivered a baby weight of 1.9 kg. The placenta separated spontaneously, except for a few lobes which were densely adherent to the anterior lower uterine segment.

The adherent portions were removed manually in piecemeal. There was extensive bleeding noted from the placental bed which was sutured with 2-0 vicryl intermittently. Bakri balloon was inserted and inflated with 350 ml saline to occlude the bleeding sinuses. The bakri

balloon was gradually deflated and removed in 12 hours. She required 3 units of PRBCs and 4 units of Fresh frozen plasma transfusion. Her postoperative period was uneventful and was discharged on 6th postoperative day with baby in good condition.

Case 2

A 42-year-old multigravida with 2 prior Caesarean sections presented with complaints of leaking per vaginum at 26+3 weeks of gestation. She had hysterotomy at 24 weeks for abruptio placenta 4 years prior to the current pregnancy. She has had her routine antenatal check-up elsewhere and was referred with previable PPROM from 24 weeks. USG pelvis suggestive of complete placenta previa with percreta (Figure 2) and MRI Pelvis done was suggestive of complete placenta previa with placenta accreta. Arrangements were made for uterine artery embolization. After keeping vascular surgeon and Cathlab team ready, she underwent Hysterotomy the next day.

Intra operatively transverse incision was made on the uterus, 850 gm female fetus was delivered, and the placenta was noted to be adherent to the anterior, right lateral, and left lateral uterine wall in the lower segment. Whole of the placenta was removed in piecemeal. Placental bed bleeding was noted and sutured with vicryl, and right uterine artery ligation was done. Uterine Artery embolization was not required. A Bakri balloon was inserted and inflated with 200 ml of saline which was gradually deflated and removed the following day. She developed high grade fever post operatively and vaginal swab and urine cultures grew Klebsiella pneumonia but blood culture was sterile. Antibiotics were escalated in accordance with culture sensitivity and she remained afebrile from then on. She was discharged in stable condition on day 12. Baby expired on neonatal day 4 due to respiratory distress syndrome, early onset sepsis with intraventricular haemorrhage and extreme low birth weight.

Case 3

A 27-year-old multiparous lady with previous 1 Caesarean section presented to our hospital at 22 weeks 1 day of gestation with complaints of difficulty in initiating micturition and diffuse abdominal pain for 2 weeks. Ultrasound showed placenta percreta. There was no APH. Hence, she was admitted for evaluation. She developed sudden onset breathlessness, tachycardia and collapsed in the ward shortly following admission. At the time of collapse also, there was no bleeding from vaginum, bedside ultrasound showed alive fetus few minutes before the collapse, which posed a huge diagnostic dilemma. Immediately after the collapse cardiopulmonary resuscitation was initiated with multidisciplinary team, airway was secured and she was successfully resuscitated following 3 cycles of CPR. To aid maternal resuscitation, laparotomy was done and found to have spontaneous uterine rupture along the previous caesarean scar with a dead fetus and a totally adherent placenta. Subtotal hysterectomy was done, since the bladder was densely adherent to the lower uterine segment.

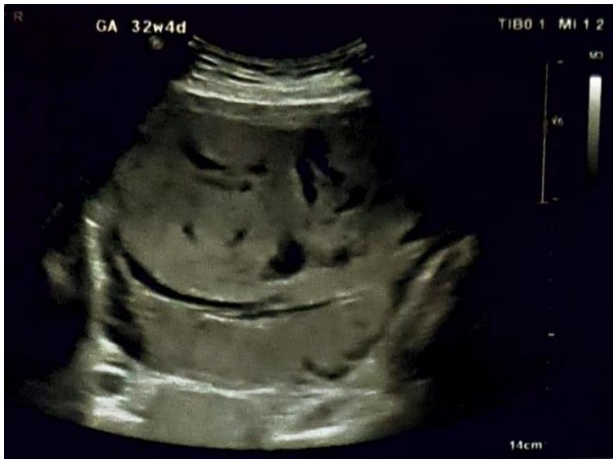

Figure 1: Central placenta previa with multiple lacunae near the scar site, mild thinning of adjacent myometrium, and loss of retroplacental hypoechogenicity.

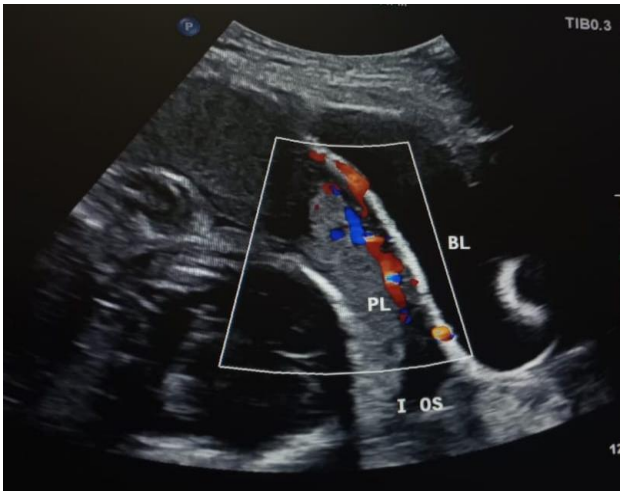

Figure 2: Anterior left lateral placenta covering internal os with placental vessels seen in myometrium upto serosa suggestive of placenta percreta.

Inadvertently bladder was injured, same was repaired and bilateral ureteric stenting was also done. Massive transfusion protocol was activated and she was transfused blood and blood products. Anterior division of Bilateral internal iliac artery was ligated in view of intractable bleeding. Postoperatively, ionotropic support was required for a day. She developed post cardiac arrest syndrome, and the sequel were altered sensorium, cortical blindness, quadriparesis. MRI with angiogram revealed global ischaemic brain injury. Retinal examination was impeccable. Vision gradually improved in 5 days. Speech therapy was initiated and she was initiated on steroids. Catheter was removed 28 days following surgery and she voided freely. Her speech improved and there were no

focal neurological deficits at discharge. Histopathology reports suggestive of placenta percreta.

DISCUSSION

In our case series, 2 of the 3 women presented with first episode of vaginal bleeding before 36 weeks and required emergency multidisciplinary approach. All cases in our series involved patients with a history of one prior lower segment cesarean section (LSCS). Every patient with placenta previa in our study exhibited abnormal placentation.

Signs of PAS on ultrasound can be identified as early as 11-14 weeks. It is advised to start serial follow-up scans from 28 weeks onward to determine the extent and severity of the invasion. The best period for assessing PAS is between 18 and 24 weeks of pregnancy.[2] In this case series, PAS was suspected in second trimester and referred to our centre and one patient was booked and diagnosed in our centre.

The American college of obstetricians and gynecologists (ACOG) recommends a scheduled Caesarean section between 34 and 35+6weeks for hemodynamically stable patients. The Royal College of Obstetricians and Gynaecologists (RCOG) advises that delivering between 35 and 36+6 weeks is optimal for best fetal outcomes. The Society of Obstetricians and Gynaecologists of Canada (SOGC) suggests an ideal delivery window between 34 and 36 weeks for the best maternal and fetal outcomes. The International Federation of Gynecology and Obstetrics (FIGO) recommends delivery at 37 weeks to minimize adverse neonatal outcomes.[3]

Caesarean-hysterectomy has been traditionally considered as the gold standard for the delivery of women with PAS. Two patients in our study had LSCS with manual removal of placenta and one had spontaneous uterine rupture with hysterectomy. The surgical management of placenta accreta spectrum disorders warrant a multidisciplinary approach to minimize blood loss. These include percutaneous balloon placement, transfusion medicine techniques, and various surgical and pharmacological strategies.

These cases often present with anatomical distortions and abnormal neovascularization, which can result in unavoidable injuries during surgical dissection or necessitate intentional cystostomy or partial cystectomy when resecting an affected posterior bladder wall.[4] In this case series, all the patients had successful recovery and only one had an alive baby.

CONCLUSION

In our study, all three cases experienced spontaneous bleeding far from term. A multidisciplinary approach is needed for effective management. The sentinel episode of bleeding can present in early trimesters, far from term. The fetal outcomes are fatal when the patients warrant emergency intervention in early trimesters. The role of conservative management in patients with bleeding per vaginum in PAS is questionable. The challenges that come with extensive surgery, multiple blood transfusion, anaesthesia related complications have a major setback on the recovery of patients. The option of preserving the uterus can be considered if the patient is hemodynamically stable but will require follow up with ultrasound and inflammatory markers. Pregnancies have been reported following conservative management of PAS.

With increase in caesarean sections, a high index of suspicion for placenta accreta spectrum disorders ought to be kept in mind. Sentinel bleed can occur in any trimester and may warrant intervention at any time. This allows the managing team to be better prepared for early diagnosis and elective intervention.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

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Cite this article as: Rajeswari KSR, Parthiban P, Vidhyantha KH. Clinical perspectives on placenta accreta spectrum: a case series. Int J Reprod Contracept Obstet Gynecol 2025;14:234-6.