International Journal of Reproduction, Contraception, Obstetrics and Gynecology
Barakat H et al. Int J Reprod Contracept Obstet Gynecol. 2026 Mar;15(3):1053-1055
www.ijrcog.org
pISSN 2320-1770 | eISSN 2320-1789

DOI: https://dx.doi.org/10.18203/2320-1770.ijrcog20260567

Case Report

Unexpected placenta accreta spectrum in a primigravida with an unscarred uterus: life-threatening hemorrhage following vaginal delivery

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Received: 31 December 2025
Accepted: 04 February 2026

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ABSTRACT

Placenta accreta spectrum disorders (PASD) are severe obstetric conditions associated with significant maternal and fetal morbidity. While the incidence of PASD has risen in correlation with increasing cesarean section rates, its occurrence in an unscarred uterus is exceptionally rare. We report a case of placenta increta in a 20-year-old primigravida with no identifiable risk factors. The diagnosis was made following a term vaginal delivery that was complicated by a retained placenta and subsequent life-threatening postpartum hemorrhage. This case is distinctive for its occurrence in a primigravida, contrasting with the few reported cases in unscarred uteri that are often described in multiparous women with a prior vaginal delivery. It underscores that PASD, while unlikely, can present in low-risk populations with no obstetric history. This report highlights the critical importance of maintaining a high index of suspicion and considering routine prenatal screening for radiological signs of PASD, even in low-risk populations.

Keywords: Hysterectomy, Placenta accreta, Placenta increta, Postpartum hemorrhage, Retained placenta

INTRODUCTION

Placenta accreta spectrum disorders (PASD) are a group of rare obstetric conditions characterized by abnormal and excessive invasion of the placenta into the uterine myometrium, including placenta accreta, increta, and percreta. These disorders are associated with severe, life-threatening complications for both the mother and the fetus during pregnancy. The reported prevalence ranges from 0.01% to 1.1%.[1,2]

The primary risk factors for PAS include prior cesarean delivery, myomectomy, uterine instrumentation or intrauterine scarring, placenta previa, smoking, maternal age over 35 years, grand multiparity, recurrent miscarriage, and a history of endometritis.[3]

Rarely, this condition can occur in an unscarred uterus, involving atypical uterine sites, and may result in spontaneous uterine rupture with possible invasion of adjacent organs.[3]

Although advances in imaging techniques allow for early diagnosis, some cases are still identified late due to atypical ultrasound features or missed recognition in patients without a history of uterine surgery or interventions.[1]

This report details the rare case of a primigravid patient with an unscarred uterus who was diagnosed with placenta increta and successfully managed with a peripartum hysterectomy for intractable postpartum hemorrhage.

To our knowledge, this represents one of the few documented instances of this condition in a woman without prior uterine surgery or vaginal delivery.

CASE REPORT

We report a case of a 20-year-old primigravida (G1P0) with an unscarred uterus and no prior history of myomectomy or dilation and curettage (D and C). She denied the use of tobacco, alcohol, opioids, or other illicit substances during pregnancy.

The patient was admitted at 40 weeks and 5 days for delivery. Antenatal care and routine ultrasounds indicated a low-risk pregnancy with an anterior, non-previa placenta (Figures 1a and b). Labor progressed normally to full cervical dilation, and she delivered a healthy male infant (APGAR score 9/10) via normal vaginal delivery with an episiotomy.

Active management of the third stage was initiated with cord traction and uterine massage. After 15 minutes without placental separation, uterotonics were given. Placenta remained retained after 30 minutes with moderate vaginal bleeding.

Manual removal was attempted: the fundal portion separated easily, but the anterior part remained firmly attached without a cleavage plane. Attempts were stopped due to resistance and visible indentation.

Blood bank confirmed unavailability of blood. Bleeding increased (>1.5l), patient became hypotensive (BP 70/50) and tachycardic (145 bpm). In the OR, tamponade with multiple pads and an inflated Foley catheter was attempted.

After general anesthesia, manual removal failed to control bleeding, necessitating total abdominal hysterectomy (Figure 1c).

Histopathological examination revealed a gravid uterus with evidence of retained placenta increta (Figure 1d).

Due to the rarity of this case, the decision was made to publish it. Written informed consent was obtained from the patient for publication, and the study was approved by the Institutional Review Board of Rafik Hariri University Hospital (IRB reference: 2025-1005).

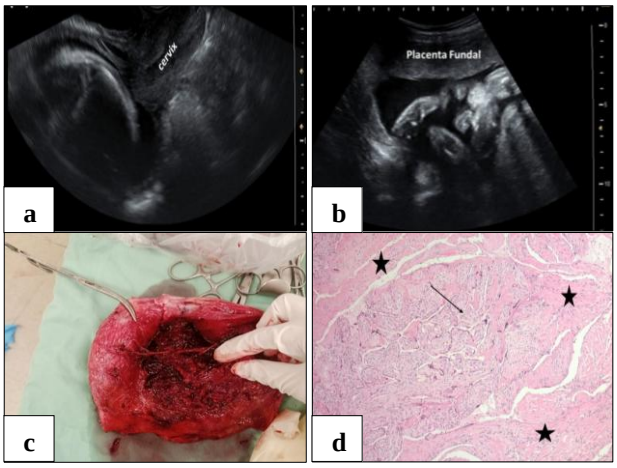

Figure 1: Placenta increta in low risk pregnancy, (a and b) normal fundal placenta (non-previa), no evidence of PAS, (c) specimen of uterus post hysterectomy with adherent placenta, and (d) hematoxylin and eosin sections showing chorionic villi (arrow) invading the myometrium (asterisk) without serosal invasion consistent with placenta increta.

DISCUSSION

This rare PASD case is of uncertain etiology, as most reported cases occur in patients with a history of uterine scarring or prior surgical procedures.[4]

Retained placenta is diagnosed when the placenta fails to deliver spontaneously within 18–60 minutes or if significant hemorrhage occurs beforehand. It can result from uterine atony, abnormally adherent placenta (PAS), or premature cervical closure. Typical risk factors include prior uterine surgery, high parity, preterm delivery, IVF conception, history of retained placenta, and congenital uterine anomalies.[5] In our case, however, the patient had none of these risk factors, nor did she exhibit uterine atony or cervical closure, leading us to consider PAS as the underlying cause.

The diagnosis of PAS is confirmed histologically; however, advancements in imaging now allow for antenatal prediction and anticipation of potential complications.

In our case, the patient underwent two routine antenatal ultrasounds—one at 27 weeks, and another at 33 weeks—but no radiological features suggestive of PAS were reported, despite the sensitivity of ultrasound with color Doppler exceeding 91%.[6]

This may be due to a lack of focused evaluation for PAS, as the patient had no identifiable risk factors in her history. Although this represented a missed opportunity in our case, similar presentations have been documented in the literature.[2,3]

There are no standardized guidelines for managing PAS; decisions depend on hemodynamic stability, complications, and facility readiness. Stable patients may undergo conservative approaches (placenta in situ, methotrexate, uterine artery embolization, or Triple P), as reported by Elkarkri et al and Kumari et al.[3,7]

As in our patient, placental non-separation suggested adherence, and an attempted manual removal caused catastrophic hemorrhage and shock, necessitating urgent peripartum hysterectomy to save the patient's life, particularly in a limited-care facility lacking a fully equipped blood bank, similar to cases reported by Mlay et al, Garg et al, and others.[2,8]

CONCLUSION

This case illustrates the rare occurrence of PAS in a primigravida with an unscarred uterus and no identifiable risk factors. Despite a normal-term spontaneous vaginal delivery, retained adherent placenta led to life-threatening hemorrhage, necessitating emergency hysterectomy. Clinicians should remain vigilant for PAS even in low-risk, first-time pregnancies, and prompt multidisciplinary intervention with access to blood transfusion is critical to optimize maternal outcomes.

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

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Cite this article as: Barakat H, Hamieh F, Barakat F, Awala M, Habib K, Naufal N, et al. Unexpected placenta accreta spectrum in a primigravida with an unscarred uterus: life-threatening hemorrhage following vaginal delivery. Int J Reprod Contracept Obstet Gynecol 2026;15:1053-5.