

Placenta percreta in a healthy uterus of a primiparous woman, a case report

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Case Report

Keywords: Placenta Percreta, Primigravida, healthy uterus, Hysterectomy

Posted Date: July 3rd, 2026

DOI: <https://doi.org/10.21203/rs.3.rs-9717426/v1>

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Additional Declarations: No competing interests reported.

Abstract

Background

Placenta previa is the most severe form of invasive placental adhesion and is usually associated with specific risk factors. However, this complication can also occur in primiparous women without any apparent risk factors. Early diagnosis and appropriate patient management are essential for effective intervention in such cases.

Case presentation:

This report presents a rare case of placenta percreta in a primiparous woman with a healthy uterus and no history of prior surgical intervention, which was definitively diagnosed intraoperatively. A 26-year-old primiparous woman of Persian ethnicity from a rural area presented at 37 weeks of gestation with a diagnosis of complete placenta previa and ultrasound findings suggestive of placental adhesions. An emergency cesarean section revealed extensive placental invasion into the uterine muscle and the external surface of the bladder. Due to failure to deliver the placenta and severe, uncontrollable bleeding, a salvage hysterectomy was performed, including partial resection of the vagina and a segment of the bladder. The patient recovered well and was discharged with her infant.

Conclusion

This case highlights that, although rare, placental adhesion spectrum can occur even in the absence of classic risk factors. Maintaining a high clinical suspicion during prenatal ultrasound—especially in cases of placenta previa—is crucial for timely diagnosis and appropriate intervention, ultimately optimizing outcomes for both mother and baby.

Introduction

Placenta percreta is the most severe form of Placenta Accreta Spectrum (PAS) disorders, characterized by chorionic villi that not only penetrate the myometrium but also extend through the uterine serosa and invade adjacent organs, such as the bladder or bowel [1, 2]. Placental percreta is a leading cause of hysterectomy during or after delivery and is associated with severe maternal complications due to bleeding, including ICU admission, the need for massive transfusion, and the development of Disseminated Intravascular Coagulation (DIC) [3].

Previous reports have described the prevalence of placenta previa as ranging from 1 in 1,000 to 1 in 70,000 births [4]. Approximately 7% of maternal deaths worldwide are caused by placenta accreta [5]. This number appears to increase with the presence of risk factors, which include uterine surgery, previous cesarean sections, placenta preevia, use of assisted reproductive technologies, and advanced

maternal age [6, 7]. Several studies have reported the occurrence of placenta accreta in association with various risk factors. For example, Farhani described a case involving a multigravid woman who experienced severe bleeding despite undergoing a hysterectomy; the patient was ultimately saved through pelvic packing [8]. Similarly, Bouab reported a case of placenta accreta that necessitated a hysterectomy [9]. However, its occurrence in a primiparous woman with a healthy uterus and no history of prior manipulation or surgery is extremely rare. This case is reported to highlight the diagnostic challenges and critical management decisions required in such scenarios.

Case Presentation

Patient Information

A 26-year-old primiparous woman with no history of medical conditions or uterine surgery presented at 37 weeks of gestation with the onset of labor pains and spotting vaginal bleeding.

Clinical findings

On admission, her vital signs were stable, with a heart rate of 92 to 100 beats per minute and blood pressure of 100/70 mm Hg. Obstetric examination revealed a uterine size consistent with gestational age, cephalic presentation, and moderate uterine contractions. The fetal heart rate was reassuring at 135 beats per minute.

Diagnosis assessment

An antenatal ultrasound at 36 weeks detected a complete placenta previa and revealed features consistent with this diagnosis. However, the patient's history showed no risk factors for placenta previa, such as previous cesarean section or other uterine surgeries (See Figure.1). The healthcare provided during pregnancy was unknown, and documentation was unavailable.

Therapeutic intervention

A vaginal examination was not performed due to the high risk of severe bleeding associated with placenta previa. Arrangements were made for an immediate emergency cesarean section, and a multidisciplinary placenta accreta management team—including an oncologist, perinatologist, pelvic floor surgeon, urologist, neonatologist, and experienced anesthesiologist—was assembled.

During the laparotomy, following the skin incision and entry into the abdominal cavity, direct evidence of placental adhesion and invasion of the external surface of the uterus, serosa, and a small area of the bladder was observed and confirmed, indicating abnormal placental invasion. The external surface of the bladder was carefully separated from the lower uterine segment and mobilized downward. A live baby

girl was delivered via classical uterine incision, weighing 2,990 g, with an Apgar score of 9 out of 10. As anticipated, the placenta was severely adherent to the parametrium, the serosa, and a small area of the anterior bladder (See Fig. 2,3).

Attempts to remove the placenta, which would have caused severe and life-threatening hemorrhage, were unsuccessful. Due to the extent of the adhesions and placental infiltration, a decision was made to perform a hysterectomy. The procedure included removal of approximately the upper third of the vagina and part of the bladder, owing to placental adhesions to the bladder. The damaged bladder was subsequently repaired.

Follow-up and outcomes

The patient required two packs of fresh frozen plasma (FFP), two units pack cell. She recovered without complications and was discharged on the third postoperative day with her baby. This study was conducted in accordance with the CARE (for **CA**se **RE**port) guidelines for case reports [10].

Discussion

This case report describes a rare instance of placenta previa in a primiparous woman with no history of uterine surgery. It highlights key similarities and differences compared to other studies. For example, a 2023 case report detailed the sudden death of a 29-year-old Egyptian primiparous woman at 32 weeks of gestation, also with no surgical history, due to uterine rupture secondary to placenta previa and bladder invasion [11]. Like the present case, that report involved a similar maternal age (28–29 years) and gestational age (32 weeks) and absence of typical risk factors. However, unlike the successful outcome in the current report, the previous case resulted in maternal and fetal death. This difference may be attributed to delayed diagnosis and lack of immediate access to emergency surgery, whereas in the present case, timely ultrasound imaging and appropriate management facilitated a positive outcome.

Another study in 2024 reported a spontaneous uterine rupture at 31 weeks in a woman with a history of a previous cesarean section. This rupture was associated with hemorrhage and hemoperitoneum and was managed with a hysterectomy[12]. Although this case did not involve a primiparous woman either, it shares similarities in acute symptoms, such as hemorrhage and shock, and the need for urgent intervention. The key difference is the association with a cesarean section in that study, which may represent a known risk factor, whereas our report involves no prior reproductive interventions.

Maharjan and et al reported a rare case of placenta accreta in a 22-year-old, 38-week primiparous woman with no history of surgery or placenta previa, who had not received adequate prenatal care and failed to expel the placenta after vaginal delivery. Following attempts to manually remove the placenta and the occurrence of severe bleeding, the diagnosis of placenta accreta was confirmed[13]. Compared to the present study, several differences are evident, the most significant being the effective and timely

management of placental adhesions, which contributed to reduced hospitalization time and improved patient recovery.

Overall, this study focuses on the clinical challenges of diagnosing conditions in primiparous women. This case highlights several crucial aspects of contemporary midwifery.

First, the absence of classic risk factors (caesarean section, curettage) often leads to oversight; in this case, the findings from the 36-week ultrasound suggested the initial diagnosis, whereas the 18-week ultrasound is the optimal time to assess placental position and placental adhesions [14]. This patient did not receive timely prenatal care, resulting in a delayed diagnosis and no referral to a specialist even at the time of diagnosis. Given that ultrasound remains one of the primary diagnostic tools, it should be actively used to identify specific signs such as the disappearance of the zona lucida, the presence of placental lacunae, thinning or loss of the myometrium behind the placenta, and other indicators within the spectrum of accreta. Therefore, it is essential to pay close attention to placental position and placental adhesions during the ultrasound assessment of abnormalities in the second trimester, especially when placenta previa is present [15].

Secondly, the timely management and collaboration of the multidisciplinary team were key factors in the successful treatment of placenta percreta with bladder invasion in this patient [16]. This rapid and targeted coordination, unlike similar cases that resulted in maternal death due to delayed intervention [11], not only saved the mother's life but also resulted in a live birth, with both discharged without long-term complications. This experience demonstrates that, in cases of placenta percreta, 'time' and 'Skilled and experienced team' are the two wings of the patient's salvation [17]. Furthermore, prenatal care plays a crucial role in early diagnosis and timely intervention.

A limitation of our study was that the surgery was performed in an emergency and stressful setting, which did not allow sufficient time to capture images for inclusion in this case report. Additionally, we were unaware of the healthcare provided and did not have access to documentation of this care.

Conclusion

Ultimately, the management of PAS is multidisciplinary and must be tailored to each individual patient. In cases of diagnosed or suspected placental abruption accompanied by massive bleeding, hysterectomy is often the only viable salvage option. For patients who are more stable, or in well-equipped facilities where the patient wishes to preserve fertility, more conservative approaches may be considered without compromising patient safety.

Abbreviations

PAS; Placenta Accreta Spectrum, Disseminated Intravascular Coagulation (DIC), Fresh Frozen Plasma (FFP), CARE (for **CA**se **RE**port)

Declarations

Funding

The authors received no funding for this study.

Competing Interests

There are no conflicts of interest among the authors.

Authors' contributions

Masoumeh Darijani authored the manuscript. Azin Alavi, Mahtab Motevasselian, Zahra Bagheri contributed to the clinical practice. The final version of the article was reviewed and approved by all the authors.

Ethics approval and consent to participate

Not applicable

Consent to participate

Written informed consent was obtained from the patient to participate in the study.

Consent to publish

Written informed consent was obtained from the patient for publication of this case report and any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal

Availability of data and materials

Not applicable.

Acknowledgments

The authors would like to thank the obstetrics and neonatal teams for their contributions to the care of the patient and neonate.

References

1. Jauniaux E, Hecht JL, Elbarmelgy RA, Elbarmelgy RM, Thabet MM, Hussein AM. Searching for placenta percreta: a prospective cohort and systematic review of case reports. Am J Obstet Gynecol. 2022;226(6):837. e1–. e13.

2. Margioulas-Siarkou C, Flindris S, Yfanti C, Empliouk E, Angelidou S, Chatzinikolaou F, et al. Placenta Percreta Previa Crossing Surg Front Cureus. 2025;17(5):e85028.
3. Munoz JL, Cheng C, McCann GA, Ramsey P, Byrne JJ. Risk factors for intensive care unit admission after cesarean hysterectomy for placenta accreta spectrum. *Int J Gynecol Obstet*. 2024;167(2):656–62.
4. Pohl R. The special case: rare gynecologic emergency of uterine perforation in placenta percreta. *Fortschr Med*. 1979;97(46):2143–4.
5. Mogos MF, Maxa T, Watts J, Laylor UJ, Emerson SH, Gillyard Cheairs T. Update on Trends in Placenta Accreta Syndrome and Its Impact on Maternal–Fetal Morbidity in the United States. *Women's Health Rep*. 2025;6(1):988–1000.
6. Lassey SC, Lands E, Hope YY, Carusi DA, Shipp TD. Risk factors for placenta accreta spectrum disorder among patients with placenta previa and prior cesarean delivery. *Am J Obstet Gynecol MFM*. 2024;6(1).
7. Alavi SM, Arjmandnia MH, Feizollahjani M, Noori E, Yousefi M. Placenta accreta spectrum; risk factors, complications, advantages and disadvantages to decrease maternal morbidity and mortality. *J Obstet Gynecol Cancer Res*. 2024;9(5):516–21.
8. Farahani M, Ataei M, Mashak B, Nirouei M, Hashemnejad M. Enormous placenta percreta bleeding in a twin pregnancy: a case report. *J Med Case Rep*. 2025;19(1):206.
9. Bouab M, Kiram H, Jalal M, Lamrissi A, Bouhya S. Uterine rupture with massive hemoperitoneum due to placenta percreta in a second trimester: A case report. *Int J Surg Case Rep*. 2022;99:107652.
10. Gagnier JJ, Kienle G, Altman DG, Moher D, Sox H, Riley D. The CARE guidelines: consensus-based clinical case reporting guideline development. *Global Adv health Med*. 2013;2(5):38–43.
11. Fnon NF, Hassan AA, Hosney HH, Mohamed AK, Khalifa AM, Mostafa EM et al. Placenta percreta in primigravida with unscarred uterus complicated by uterine rupture and sudden maternal and fetal death: an autopsy case report. *Forensic Science, Medicine and Pathology*. 2024;20(3):965–70.
12. Flissate F, Kassou O, Mahfoud H, Zeraidi N, Baidada A. Placenta percreta complicated with uterine rupture in the third trimester: A case report. *Int J Surg Case Rep*. 2024;125:110411.
13. Maharjan M, Shrestha P, Ghimire S. A rare case of morbidly adherent placenta in a young Primigravida with RH negative pregnancy managed with peripartum subtotal hysterectomy. *Int J Surg Case Rep*. 2024;114:109121.
14. Berhan YUT. A Literature Review of Placenta Accreta Spectrum Disorder: The Place of Expectant Management in Ethiopian Setup. *Ethiop J Health Sci*. 2020;30(2).
15. Jauniaux E, Aplin JD, Fox KA, Afshar Y, Hussein AM, Jones CJ, et al. Placenta accreta spectrum. *Nat Reviews Disease Primers*. 2025;11(1):40.
16. Ahmed ACM, N'Taba A, Vilaly K, Nadi M, Cheikh TE, Abed A et al. Placenta Accreta Spectrum in Mauritania: Epidemiological Characteristics, Clinical Challenges, and Management Perspectives. *Cureus*. 2025;17(10).

17. Nieto-Calvache AJ, Palacios-Jaraquemada JM, Osanan G, Cortes-Charry R, Aryananda RA, Bangal VB, et al. Lack of experience is a main cause of maternal death in placenta accreta spectrum patients. Acta Obstet Gynecol Scand. 2021;100(8):1445–53.

Figures

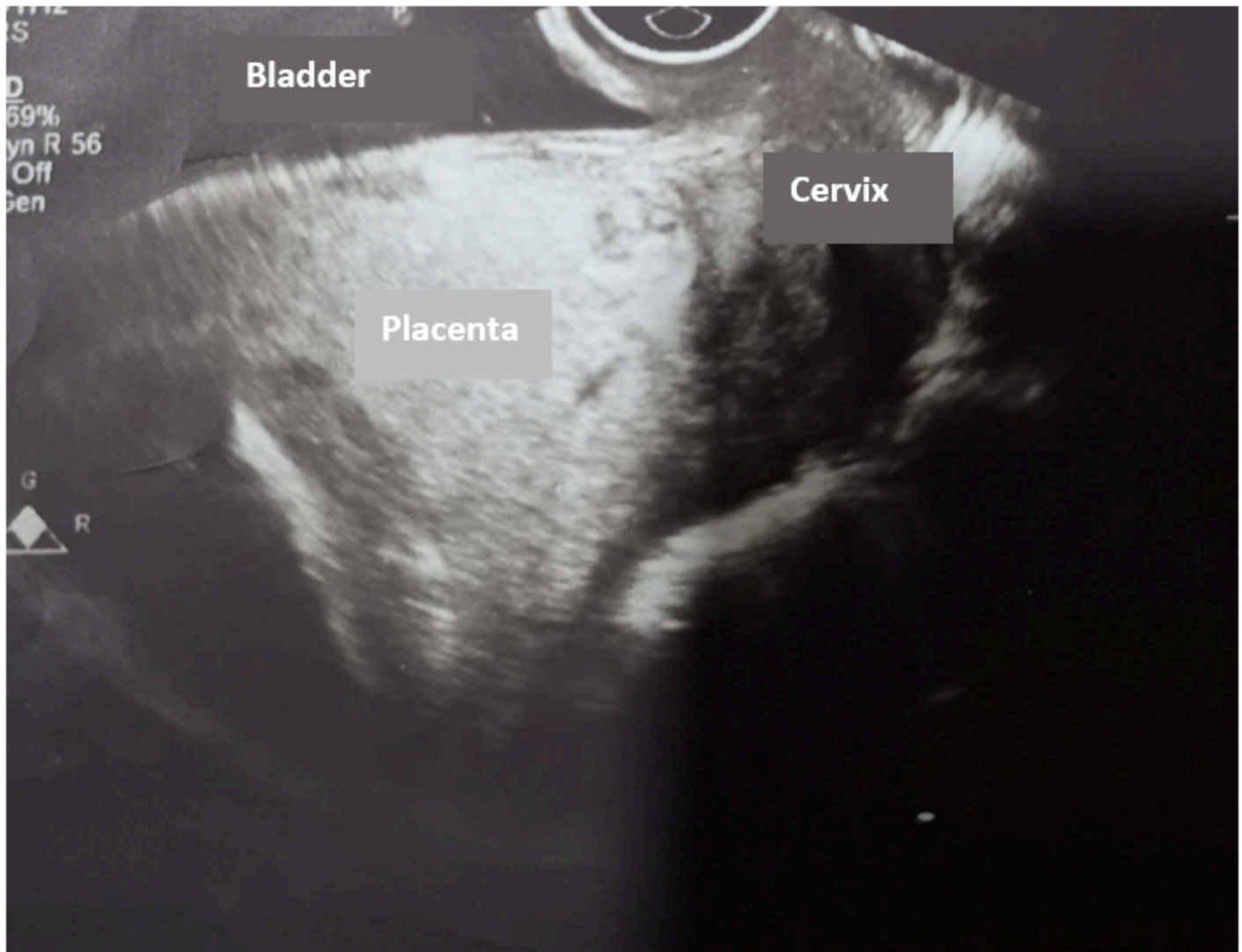


Figure 1

Color Doppler ultrasound reveals complete placenta previa with signs suggestive of possible percreta involvement.

Note: Placenta; complete previa with anterior and mostly posterior Component; no abortion sign, grade Ⅱ. Retroplacenta hypoechoic myometrium is markedly thinned and abscre and indeterminate is some area is noted. No obvious extension of placenta up to serosa surface or beyond it. Placenta is somewhat heterogeneous with some lucency in it. No obvious lacuna or bridging vessels. Multiple vessles are note

within cervix and around it. Uterovesical septum is slightly irregular and a few vessels in it above finding are compatible with increta but mild degree of precreta sign could not exclude.



Figure 2

Placenta percreta with invasion in to parametrium and bladder



Figure 3

complete placenta previa/percreta with invasion in to the bladder and vagina