

Placenta Percreta Complicated by a Silent Uterine Rupture and Postpartum Haemorrhage: A First Experience at a Teaching Hospital in Southwest Nigeria

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ABSTRACT

Placenta percreta, the most severe form of placenta accreta spectrum (PAS) disorder, is a life-threatening obstetric condition characterized by abnormal placental invasion into the uterine wall. Silent uterine rupture, without classical signs, complicates diagnosis and management. This report documents the first known case of placenta percreta with silent uterine rupture and postpartum hemorrhage (PPH) at Ekiti State University Teaching Hospital, Nigeria. A 48-year-old primigravida with a prior myomectomy conceived through in vitro fertilization (IVF) and underwent elective Caesarean delivery at 38 weeks. Intraoperatively, placenta percreta with complete myometrial invasion was identified, leading to silent uterine rupture. A hysterectomy was performed to control hemorrhage. The patient delivered a live neonate weighing 3.32 kg with APGAR scores of 5 and 8. Despite blood loss of 1200 mL, she remained stable without transfusion and recovered uneventfully. This case highlights the importance of antenatal surveillance in high-risk pregnancies and the need for early recognition of PAS. The successful management underscores the role of a multidisciplinary approach. Improved diagnostic strategies and institutional preparedness are essential for optimizing maternal

outcomes in resource-limited settings.

Keywords: Placenta percreta, Silent uterine rupture, Postpartum hemorrhage, Nigeria

INTRODUCTION

Placenta percreta, the most severe form of placenta accreta spectrum disorder, occurs when placental villi penetrate the uterine wall and, in some cases, adjacent organs; it is a life-threatening condition associated with severe maternal morbidity and mortality due to complications such as uterine rupture and massive postpartum hemorrhage. [1]. Silent uterine rupture, characterized by the absence of classic symptoms, complicates early diagnosis, making timely intervention challenging [2]. The combination of placenta percreta and silent uterine rupture represents an obstetric emergency with significant clinical implications [3].

This case report documents the first known experience of placenta percreta complicated by silent uterine rupture and PPH at Ekiti State University Teaching Hospital, Nigeria. It highlights the critical need for heightened clinical vigilance, improved diagnostic capacity, and institutional preparedness in managing rare and complex obstetric conditions in resource-limited settings. Given that PPH remains a leading cause of maternal mortality in Nigeria, contributing significantly to the country's high maternal death rate [4], reporting such cases adds to the knowledge base and emphasizes the importance of early detection and multidisciplinary management. This case underscores the urgent need for systemic improvements to reduce maternal mortality and enhance outcomes for high-risk pregnancies in Nigeria and similar contexts.

Patient and Management

The patient was a 48-year-old primigravida, now primipara, with a pregnancy conceived through in vitro fertilization (IVF). She had undergone a myomectomy two years before conception. The pregnancy was booked at 15 weeks of gestation, during which she presented with no complaints. Initial clinical evaluation, including physical examination, obstetric ultrasound, and booking laboratory parameters, were all unremarkable.

Given her advanced maternal age, history of uterine surgery, and IVF conception, the pregnancy was categorized as high-risk. Consequently, she was placed on an intensified antenatal care schedule, being reviewed biweekly until 28 weeks and weekly thereafter until delivery. The patient adhered to her antenatal appointments and routine interventions, including haematinics, tetanus toxoid immunization, and malaria prophylaxis. Serial obstetric ultrasounds conducted throughout gestation revealed normal fetal growth and development, with no anomalies detected.

At 36 weeks, she was counseled on the potential risks of prolonged gestation and the need for an elective Caesarean section, scheduled at 38 weeks of gestation, with a preoperative packed cell volume of 39%. The surgery was performed as planned, revealing a well-formed lower uterine segment and a live female neonate weighing 3.32 kg, with APGAR scores of 5 and 8 at the first and fifth minutes, respectively.

Intraoperatively, the placenta was observed to have invaded the posterior uterine wall, penetrating through its full thickness and covered only by a thin layer of membrane (figure 1). Active hemorrhaging from the site necessitated a prompt hysterectomy to control bleeding and prevent maternal morbidity. Although intraoperative blood loss was estimated to be about 1200mls, the patient was not given blood as she was clinically stable. Postoperatively, the patient, with her baby, was stable and in good health condition, with the mother's 2nd day postoperative packed cell volume being 31%.

Histological analysis of the uterus and placenta confirmed the diagnosis of placenta percreta, with no additional pathological findings. Postoperatively, the patient received counseling regarding future fertility options, including surrogacy, fostering, and adoption, considering the irreversible nature of the hysterectomy.

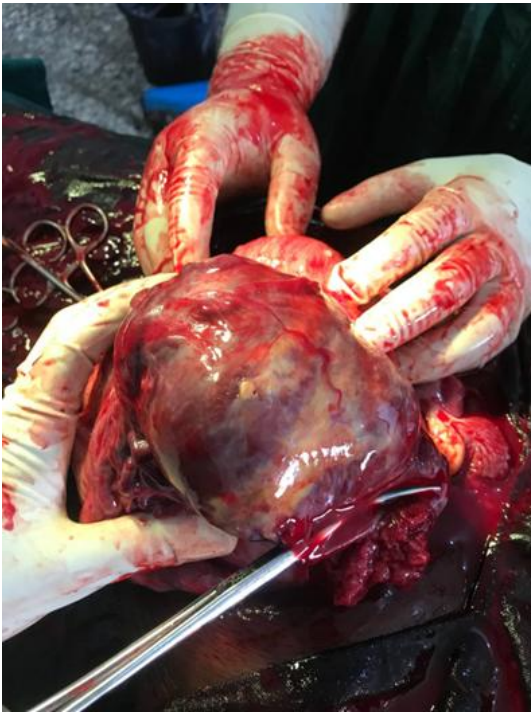


Figure 1: The posterior part of the uterus showing the area of the placenta percreta

DISCUSSION

Placenta accreta spectrum (PAS) represents a significant obstetric challenge due to its potential for severe maternal morbidity and mortality [5]. It encompasses abnormal placental adherence to or invasion into the myometrium and adjacent structures, ranging from placenta accreta, through increta to placenta percreta. The incidence of PAS has escalated, primarily driven by the rising global Caesarean delivery rates, as reported by multiple studies [6].

This case underscores the multifactorial etiology of PAS, where prior uterine surgeries, such as myomectomy and IVF conception, play pivotal roles as risk factors[7]. Other recognized risk factors include placenta previa, repeated dilatation and curettage, advanced maternal age, and multiparity. A recent meta-analysis corroborates that Caesarean delivery in combination with placenta previa amplifies the risk of PAS by about 50% [8].

Diagnosis hinges on a high index of suspicion, especially in high-risk cases like the index patient. Ultrasound remains the cornerstone of diagnosis, with features including placental lacunae, thinning of the myometrium, and turbulent flow on Doppler studies; while magnetic resonance imaging (MRI) adds value in ambiguous cases, a systematic review notes its sensitivity and specificity vary depending on expertise and equipment availability [9].

Management is complex and requires a multidisciplinary approach; conservative measures, such as uterine artery embolization and methotrexate administration, are reserved for selected cases where fertility preservation is prioritized. However, these methods are associated with substantial risks, including significant hemorrhage and infection, as documented in case series from both high- and low-resource settings [10]. Definitive management often involves a hysterectomy, particularly in cases of placenta percreta with deep myometrial penetration or adjacent organ invasion. This approach minimizes maternal morbidity and is the treatment of choice in life-threatening hemorrhage, consistent with guidelines from the American College of Obstetricians and Gynecologists (ACOG).

This case aligns with the growing evidence that early antenatal detection and planned delivery in a specialized center significantly improve outcomes [9]. However, the lack of universal access to advanced diagnostic tools like MRI and blood transfusion services in low-resource settings highlights persistent global disparities. Future research should focus on improving diagnostic algorithms and exploring cost-effective conservative therapies

to expand options in resource-constrained environments. Addressing these gaps can enhance maternal outcomes and better manage PAS cases globally.

CONCLUSION

This case highlights the complexity and high-risk nature of managing placenta accreta spectrum disorders, particularly in the context of placenta percreta complicated by silent uterine rupture and postpartum hemorrhage. Early identification of risk factors, including previous uterine surgeries and IVF conception, coupled with meticulous antenatal monitoring, prove critical in optimizing outcomes. The successful management of this life-threatening condition through prompt surgical intervention emphasizes the importance of a multidisciplinary approach, advanced surgical expertise, and robust perioperative care. This first reported case at the teaching hospital contributes valuable insights into addressing PAS in resource-limited settings while advocating for improved diagnostic and management strategies to reduce maternal morbidity and mortality.

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