



# Placenta Percreta Causing Uterine Rupture in an Unscarred Uterus that Harbored Twin Gestation: A Case Report

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## Abstract

**Introduction:** Placenta percreta is a component and most invasive form of Placenta Accreta Spectrum (PAS) with high risk of maternal and perinatal morbidity and mortality.

**Case Report:** We present a rare case of silent uterine rupture due to placenta percreta at 32 weeks' gestation in an unscarred uterus that harbored twin gestation. Patient was a 32-year-old P1<sup>+</sup>A2 at 32 weeks gestation with complaints of abdominal pain and dysuria. Urgent abdominopelvic ultrasound revealed presence of two viable fetuses with estimated fetal weights of 1.7 and 1.6 for T1 and T2 respectively. The placenta was in anterior mid-uterine and presence of echo rich fluid in the peritoneum was noted. She had an emergency exploratory laparotomy, about 200 ml of Hemoperitoneum was observed and two live male fetuses delivered; the leading twin was in cephalic presentation, weighed 1.7 kg with APGAR scores of 7 in the 1<sup>st</sup> and 9 in the 5<sup>th</sup> minutes. The second twin was in breech presentation, weighed 1.6 kg with APGAR scores of 7 in the 1<sup>st</sup> and 10 in the 5<sup>th</sup> minutes. They had monochorionic and diamniotic placenta that situated at the anterior mid-uterine area, invaded and perforated through the myometrial wall onto the serosa, aborting on the anterior abdominal wall and bleeding. The neonates were nursed in neonatal intensive care unit for 3 weeks and discharged in good health condition. The patient had conservative management (placenta tissue was removed as much as possible, ruptured site sutured and methotrexate administered to the patient).

**Conclusion:** The morbidity and mortality associated with uterine rupture due to placenta percreta calls for meticulous and systematic search for clinical and ultrasound evidence of PAS during antenatal and routine antenatal ultrasonography respectively, in addition to prompt surgical intervention in at risk patients to avert possible catastrophe that may occur.

**Keywords:** Placenta percreta; Uterine rupture; Twin gestation

## Introduction

Placenta percreta is a component and most invasive form of placenta accreta spectrum with high risk of maternal and perinatal morbidity and mortality [1,2]. It is very rare, accounting for about 5% cases of placenta accrete spectrum [3]. We present a rare case of spontaneous silent uterine rupture at 32 weeks' gestation in an unscarred uterus that harbored monochorionic, diamniotic twin.

## Case Presentation

Our patient was a booked 32-year-old P1<sup>+</sup>0 with two living children who was admitted *via* gynecology emergency unit into the prenatal ward following complaint of unprovoked abdominal pain of 8 h duration. There was no bleeding per vaginam or previous antepartum hemorrhage, no drainage of liquor, weakness or fainting spell. There was no history of fever, headaches, frequency of urination but dysuria. She was not a known hypertensive and no prior uterine instrumentation. Prior laboratory investigations and ultrasound scan revealed no pathology.

Examination showed that she was a young woman in mild intermittent abdominal pain, she was not pale. Her respiratory rate was 19 c/min, her pulse rate was 89 b/min and BP 120/80 mmHg.

Her abdomen was uniformly enlarged and moved with respiration. SFH-36 cm, multiple fetal

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Received Date: 31 Jul 2023

Accepted Date: 21 Aug 2023

Published Date: 26 Aug 2023

### Citation:

Ezenwaez MN, Nweze SO, Odugu BU, Onah LN, Mba SG, Ortuanya KE, et al. Placenta Percreta Causing Uterine Rupture in an Unscarred Uterus that Harbored Twin Gestation: A Case Report. *J Clin Obstet Gynecol Infertil.* 2023; 7(2): 1059.

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Figure 1: Placenta percreta.



Figure 2: Placenta Percreta.

poles were palpated. She had one uterine contraction in 10 min over 35 sec. Fetal heart rate for T1 was 150 b/min and 141 b/min for T2. Cervical examination revealed neither bleeding per vaginam nor cervical changes. An initial assessment of preterm contraction in a primigravida with twin gestation was made. She was commenced on dexamethasone, tocolytic, antibiotics and malaria chemoprophylaxis.

Her blood/urine samples were collected for basic laboratory tests. Full blood count result was normal but for packed cell volume of 28%. Urine analysis/MCS and MP tests were normal. Urgent abdominopelvic ultrasound scan revealed presence of two viable fetuses at gestational age of 32 weeks with weights of 1.7 and 1.6 for T1 and T2 respectively. The placenta was anterior mid-uterine in location and there was presence of echo rich fluid in the peritoneum (hemoperitoneum) suggesting possible silent uterine rupture. She was counselled and prepared for an emergency exploratory laparotomy. Intraoperatively, Hemoperitoneum of about 200 ml was noted. Two live male fetuses were delivered; the leading twin was in cephalic presentation, weighed 1.7 kg, with APGAR score of 7 in the 1<sup>st</sup> and 9 in the 5<sup>th</sup> minutes. The second twin was in breech presentation, weighed 1.6 kg with APGAR scores of 7 in the 1<sup>st</sup> and 10 in the 5<sup>th</sup> minutes. They had monochorionic diamniotic placenta, situated at the anterior mid-uterine area which invaded and perforated through the myometrial wall onto the serosa, aborting on the anterior abdominal wall and bleeding. The neonates were resuscitated and transferred to neonatal intensive care unit. The placenta tissue was removed as much as possible, bleeding areas in the anterior uterine wall arrested with suture and methotrexate given to the patient. Two units of blood were transfused intraoperatively. Her postoperative care/condition was satisfactory. She was debriefed on the extent of the surgery and counselled on contraceptive and the importance of early booking/

management of her subsequent pregnancies in tertiary institution under an obstetric-led care. She was discharged after 5 days of surgery and her babies also discharged and reunited to her in sound health after 3 weeks in neonatal intensive care unit (Figure 1, 2).

## Discussion

Placenta percreta involves invasion of the myometrium beyond the serosa or nearby organs like bladder and intestine [4]. In the index case, the placenta migrated beyond the serosa, aborting on the posterior surface of the anterior abdominal wall.

Placenta percreta occurs due to abnormal development of the decidua basalis and previous injury to the uterine wall layers. The incidence of placenta percreta has increased from 10% to 30% due to rising rate of cesarean delivery [5]. The risk factors to development of placenta percreta include cesarean delivery, prior myomectomy, uterine surgeries, curettage, multiparity and advanced maternal age [6].

Placenta accreta spectrum is a notable cause of antepartum and postpartum hemorrhage, however, placenta percreta as a cause of uterine rupture in an unscarred uterus is rare though has been reported [7,8]. Spontaneous uterine rupture during pregnancy due to placenta percreta is a serious life-threatening complication both for the mother and fetus especially in event of delay in diagnosis. Complication such as maternal bleeding can get worse and leads to the need for urgent blood transfusions, hysterectomy, bladder injury, maternal death and fetal prematurity, lower APGAR scores, and fetal death. These complications were averted in both the mother and the fetus in the index case due to high level of surveillance and index of suspicion in addition to prompt surgical intervention.

Imaging modalities commonly utilized in the diagnosis of PAS include transabdominal and transvaginal ultrasound, color Doppler ultrasound, and MRI. Sonographic findings which include anechoic areas, an irregular placental-myometrial interface, loss of placental homogeneity that is replaced by intraplacental sonolucent spaces and hypervascularity of the bladder may likely give out the diagnosis before the manifestation of symptoms [9,10]. Similarly, unexplained elevations in maternal serum Alpha-Fetoprotein (msAFP) in the second trimester up to the tune of >2.0-2.5 multiples of the median and creatinine kinase, along with positive ultrasound findings also helps in the diagnosis [11].

Total or subtotal hysterectomy as well as conservative management may be considered depending on the extent of rupture, hemodynamic status of the patient and expertise of the surgeon. Our patient had successful conservative management (repair with methotrexate treatment).

## Conclusion

Ruptured uterus should always be entertained as a differential diagnosis for abdominal pain especially in the second and third trimesters. The morbidity and mortality associated with uterine rupture due to placenta percreta calls for meticulous and systematic search for clinical and ultrasound evidence of PAS during antenatal care and routine antenatal ultrasonography respectively, in addition to prompt surgical intervention in at risk patients to avert possible catastrophe that may occur.

## Consent

Written consent of the patient was gotten for this publication.

## Conflict of Interest

The authors had no conflict of interest.

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