

Placenta Percreta with Spontaneous Rupture of an Unscarred Uterus During Spontaneous Labour [Version 1, 2 Approved]

Ayakannu T*

Obstetrics and Gynaecology Department, Maidstone and Tunbridge Wells NHS Trust, UK

***Corresponding author:** Thangesweran Ayakannu, Obstetrics and Gynaecology Department, Maidstone Hospital, Hermitage Lane, Maidstone, Kent, ME16 9QQ, UK, Email: thangesweran@hotmail.com; t.ayakannu@nhs.net

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Abstract

Spontaneous uterine rupture during labour, complicated by undiagnosed placenta percreta, is an acute obstetrics surgical emergency, with a potential catastrophic outcome that can result in high rates of foeto-maternal morbidity and mortality. In this report, I present the details of a 30 year old woman (gravid 2, para 1) who had no prior history of uterine surgery, who was in spontaneous labour and who suddenly presented with acute epigastric pain and severe blood stained liquor. An emergency Caesarean section was performed and revealed the presence of a lifeless fetus in the peritoneal cavity accompanied by a complete separation of the placenta and fetal membranes. These were external to the uterus through a 10 cm uterine wall defect. The products of conception were removed and the uterine wall repaired. Obstetricians and general clinicians should have a high index of suspicion for uterine rupture in women presenting with signs and symptoms of acute abdominal pain for early diagnosis and prompt treatment of uterine rupture, regardless of parity or history of previous uterine surgery because prompt action may play a pivotal role in the outcome and patient prognosis.

Keywords

Spontaneous Uterine Rupture; Unscarred Uterus; Placenta Percreta; Labour

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Introduction

Placenta percreta is a rare complication of pregnancy and is potentially life-threatening for both the mother and fetus. Rupture of a pregnant uterus occurs most often in a scarred uterus, such as one subjected to a previous trans-myometrial surgical incision, which commonly follows Caesarean section, or spontaneous rupture of a non-scarred uterus during spontaneous labour, although the latter event is relatively rare. Recently, it has been documented that the incidence of this event is increasing [1] and furthermore, if mortality is not the endpoint, then spontaneous rupture of a non-scarred uterus during spontaneous labour can be associated with higher major maternal and neonatal morbidities than cases of rupture of the scarred uterus [2].

Case Report

A 30 year old woman (gravida 2, para 1) was admitted to the labour ward at 38+6 weeks gestation and in spontaneous labour. Her previous obstetrics history was one miscarriage at x weeks and one full-term normal vaginal delivery. On physical examination, the patient seemed to be in moderate distress secondary to uterine contractions, which were very frequent (7-8 in 10 minutes). Her blood pressure was 167/103 mmHg, her heart rate was 100 beats/min and a temperature of 36.9°C. The abdomen and uterus were soft and non-tender. CTG was reactive. Pelvic examination revealed 3 cm dilated cervix with bulging membranes. One hour after her first vaginal examination, she had spontaneous rupture of membranes and the liquor was blood stained and the fetal heart was 140 beats/min. Approximately two hours later, she complained of severe epigastric pain, which was accompanied with the appearance of severe blood stain liquor containing clotted blood. Her systolic blood pressure was 140mmHg and heart rate 40 beats/min. This was accompanied by no symptomatic improvement. Emergency Caesarean section was performed. Immediately after opening the abdomen, the fetus was found lifeless and within the peritoneal cavity. Complete separation of the placenta and the fetal membranes were noted through a left posterior uterine wall defect. The defect was repaired with deep interrupted vicryl sutures and the abdomen closed with a drain in place. The total blood loss was estimated at 1500 mls, and two units of blood were transfused post-operatively. The patient recovered well and was discharged on the 6th post-operative day. Following this life-threatening experience, the patient had two uneventful pregnancies, both delivered by elective Caesarean section. She had bilateral tubal ligation following her last delivery.

Discussion

Abnormal placentation results in various conditions such as placenta praevia, vasa previa and placenta accreta [3]. Placenta accreta involves a spectrum of abnormal placentation events resulting in accreta, increta and percreta [4]. Placenta

percreta is the severest form of placental anomalies where there is complete penetration of the chorionic villi through the uterine wall and where the placenta may even attach itself to the surrounding organs such as the bladder or bowel. This type of anomaly constitutes about 5% of all adherent placentas. Other forms include: accreta where the placental villi grow into the basal decidua and may be in direct contact with the myometrium (80%); placenta increta where the villi invade directly into the myometrium (15%) [5,6]. Spontaneous uterine rupture of an unscarred gravid uterus in labour is unexpected and potentially one of the most serious and dangerous obstetric complications because it is associated with high maternal and fetal mortality and is a very rare event involving 1 in 17,000-20,000 deliveries [7,8]. These two entities are independently rare.

Risk factors for placenta percreta include uterine malformation, submucous myoma, septic endometritis, previous Caesarean section and other uterine operations such as dilatation and curettage, and previous manual removal of the placenta [9]. The risk rises proportionately with the number of Caesarean sections, 43-60% of patients with placenta previa/percreta have previously had Caesarean section, although none of these events were evident in this case's previous obstetric history.

Uterine rupture may be either traumatic or spontaneous. Traumatic factors include labour inductions, oxytocin, prostaglandins, instrumental deliveries, an internal podalic version and the presence of acute abdominal trauma. The most common cause of uterine rupture is separation of previous Caesarean section scar. Spontaneous uterine rupture in an unscarred uterus may develop in women of high parity, in congenitally abnormal uterus and in cases with previous placental percreta [10,11,12]. Women with risk factors should be screened by ultrasound and colour Doppler studies, although magnetic resonance imaging (MRI), where available may also be helpful by delineating the placental-maternal interface [5,6].

The most common presentation of uterine rupture is sudden severe fetal heart rate deceleration without improvement. Other common symptoms include sudden, severe abdominal pain with fetal bradycardia and cessation of uterine contraction with vaginal bleeding and shock [13]. Maternal mortality from uterine rupture is not uncommon and results from haemorrhagic shock, sepsis, disseminated intravascular coagulation, pulmonary embolism and renal failure. Fetal outcome is also a significant concern since it carries a high rate of mortality. Optimal management includes; early recognition of risk factors and antenatal diagnosis, wherever possible. Early attention to ABC's and surgical intervention is usually the key to successful treatment of uterine rupture, so that patients can be treated conservatively to preserve fertility or by hysterectomy to prevent maternal death. Immediate Caesarean section followed by hysterectomy results in lower mortality rates and may be necessary in cases of uncontrollable bleeding. The patient that is described in this report was successfully treated with conservative management and following this life-threatening ex-

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perience, she went on to have two uneventful pregnancies, primarily because they were closely monitored antenatally and delivered by elective Caesarean section.

Conclusion

Placenta percreta occurring during spontaneous rupture of an unscarred uterus during spontaneous labour is extremely rare. This case report aims to contribute to the insight and knowledge of this rare and catastrophic complication of pregnancy. It highlights the importance of immediate surgical management in decreasing maternal morbidity and mortality. Our case also demonstrates that conservative management can be successful and worthwhile in preserving fertility as our patient had a further two pregnancies, and with close antenatal monitoring, achieved good outcomes.

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