



Case report

Uterine rupture with massive hemoperitoneum due to placenta percreta in a second trimester: A case report

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ABSTRACT

Introduction: Uterine rupture due to placenta percreta is very rare. It often occurs in patients with a history of Cesarean section.

Quick diagnosis, management and intervention improves survival rate and decreases maternal and foetal morbidity.

Observation: Patient, 36 years old, mother of three children delivered by cesarean section, admitted for acute abdominal pain in the context of a poorly monitored pregnancy estimated at 25 weeks of amenorrhea.

Pelvic ultrasound showed a large peritoneal effusion with the presence of an evolving intrauterine pregnancy with cardiac activity present, the placenta was with anterior coverage.

An emergency laparotomy revealed uterine rupture with active hemorrhage localized on the anterior uterine scar with placental protrusion was noted. A cesarean section was quickly performed to save the fetus. The placenta was left in place and a difficult hysterectomy was then undertaken.

Discussion: Uterine rupture in second trimester caused by placental percreta is a rare event that can be life threatening for both mother and fetus.

Placenta percreta should be considered when diagnosing internal bleeding in a patient during the first trimester of pregnancy.

Conclusion: Placenta percreta is a rare but severe obstetric complication that is potentially life threatening for both the mother and fetus.

It is important to maintain a high level of clinical suspicion for this disease in pregnant women with acute abdomen, especially those with specific risk factors.

1. Introduction

Placenta percreta is associated with high foetal and maternal morbidity in ante-per and post-partum due to complications of hemorrhage.

Uterine rupture due to placenta percreta is very rare. It often occurs in patients with a history of Cesarean section [1].

Quick diagnosis, management and intervention improves survival rate and decreases maternal and foetal morbidity.

Due to the rarity of cases and the limited data on this complication, we hope to contribute to the study of this type of incident, through a case of uterine rupture on placenta percreta on a pregnancy of 25 weeks of gestation admitted to the department of gynecology-obstetrics of the University Hospital of Casablanca Morocco.

This work has been reported with respect to the SCARE 2020 criteria [2].

2. Observation

Patient, 36 years old, mother of three children delivered by cesarean section, admitted for acute abdominal pain evolving 5 h in a poorly supervised pregnancy estimated at 25 weeks of amenorrhea. She had no history of hypertension, trauma, surgical or medical illness.

The clinical examination found a conscious patient with generalized mucocutaneous pallor, impregnable blood pressure, tachycardia at 120 beats per minute, the abdominal examination objectified a generalized abdominal defense, on gynecological examination, and the cervix has been closed with a small amount of bleeding.

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Pelvic ultrasound showed a large peritoneal effusion detaching the liver with the presence of an evolving intrauterine pregnancy with cardiac activity present, fetal biometrics were consistent with term, the placenta was anterior covering.

At the biological assessment, the hemoglobin level was 7.2 g/L, a prothrombin level at 80 %, the renal function was normal.

An emergency laparotomy was performed under general anesthesia which revealed a very abundant hemoperitoneum aspirated (2 l). On exploration, uterine rupture with active hemorrhage located on the anterior uterine scar with placental protrusion was noted. A cesarean section was quickly performed to save the fetus. The placenta was left in place and a difficult hysterectomy was then undertaken. Placenta percreta with uterine rupture was confirmed. The bladder was intact. The patient received a total of 7 units of blood and 3 units of fresh frozen plasma. The postoperative course was uneventful. The surgical specimen (Fig. 1) was sent to pathology where the diagnosis of placenta percreta was confirmed.

3. Discussion

Abnormal placentation can be classified as placenta accreta, increta or placenta percreta, depending on the extent of myometrial invasion. In placenta percreta, the chorionic villi completely penetrate the uterus to invade the serosa and beyond [3].

It is the severest form of placental invasion anomalies with an average incidence of 1 in 7000 pregnancies [4].

This incidence is increased with increasing number of cesarean sections over the past few decades [5].

The major predisposing factor for this placental invasion anomaly is a prior cesarean delivery. Other predisposing factors include previous uterine surgery, myomectomy, curettage, submucous myoma, advanced maternal age and multiparity [6].



Fig. 1. Image of the hysterectomy specimen showing the invasion of the placenta in the lower segment.

Uterine rupture in second trimester caused by placental percreta is a rare event that can be life threatening for both mother and fetus.

However, the clinical presentation of this complication ranges from mild abdominal pain to hemorrhagic shock [7].

Thus, placenta percreta should be considered when diagnosing internal bleeding in a patient during the first trimester of pregnancy.

It is usually diagnosed intra-operatively [8].

A study by Jang et al. showed that the site of uterine rupture is the fundus in the first trimester, but that the site most often affected in late gestation is the lower segment [1]. In our patient, the lower uterine segment ruptured due to thinning of the myometrium by placental trophoblastic tissue.

Intra-abdominal hemorrhage due to placenta percreta can mimic many conditions. Other conditions involved in the differential diagnosis include hepatic or splenic rupture, ovarian torsion or cyst rupture, heterotopic pregnancy, and acute appendicitis.

Uterine rupture must be considered in differential diagnoses of severe abdominal pain in patients with or without risk factors with placenta percreta and acute abdomen with hemoperitoneum, even in the early second trimester [9].

The traditional treatment for placenta percreta is hysterectomy. Today, conservative treatment may be an attractive alternative provided that patients are carefully selected [10].

Conservative options include leaving the placenta in situ, localized resection of the placental implantation site, over-sewing of the placental vascular bed, uterine compression sutures, uterine artery embolization, uterine or hypogastric artery ligation, and methotrexate administration [11]. The success rate of these techniques is limited. In addition, a secondary hysterectomy is required in up to 31 % of placenta percreta cases treated conservatively.

4. Conclusion

Placenta percreta is a rare but severe obstetric complication that is potentially life threatening for both the mother and fetus. In the early stage of uterine rupture caused by an abnormally invasive placenta, the presenting symptoms may mimic surgical conditions such as acute appendicitis or intestinal obstruction.

It is important to maintain a high level of clinical suspicion for this disease in pregnant women with acute abdomen, especially those with specific risk factors.

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Consent

Written informed consent for publication of their clinical details and/or clinical images was obtained from the patient.

Ethical approval

I declare on my honor that the ethical approval has been exempted by my establishment.

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Registration of research studies

None.

Declaration of competing interest

The authors declare having no conflicts of interest for this article.

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