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Placenta Accreta Spectrum After Surgical Management of Retained Products of Conception, with no History of Previous Caesarean Section – Case Report and Literature Review

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Abstract

The placenta accreta spectrum (PAS), which is defined as the abnormal invasion of the trophoblastic tissue through the decidua basalis and myometrium, sometimes extending to other pelvic organs, is a potentially life-threatening complication. Placenta praevia and PAS are associated with high maternal and neonatal morbidity and mortality.

We present a case of placenta accreta spectrum secondary to surgical management of retained products of conception (RPOC) and no history of previous caesarean sections (CS). This was not detected during the pregnancy because of lack of history of CS despite the presence of a low-lying placenta. We want to highlight the importance of suspecting PAS in cases with a history of surgical management of RPOC even if they don`t have a history of CS.

Keywords: Caesarean Section; Placenta Accreta Spectrum; Conception

Introduction

Placenta accreta spectrum is classified depending on the degree of trophoblastic invasion as accreta (invasion less than 50% of the myometrium), increta (invasion more than 50% of the myometrium) or percreta (invasion of the serosa and adjacent organs) [2]. However, the name of placenta accreta spectrum is considered the best in order to correctly cover all the possible situations [1].

The incidence of PAS is rising worldwide from 1 in 2500 a few years ago to about 1 in 500 now [3] as the rate of caesarean sections, assisted reproductive technology (ART) and maternal age are on the rise [1]. However, PAS can have other causes besides caesarean sections. Any disruption of the integrity of the decidua basalis can lead to PAS. For example, dilation and curettage (D&C), endometrial ablation, myomectomy or other uterine surgical procedures with endometrial involvement. As per RCOG guidelines: "The major risk factors for placenta accreta spectrum are history of accreta in a previous pregnancy, previous caesarean delivery and other uterine surgery, including repeated endometrial curettage" [1].

There are important consequences to this condition. The fetal complications are mainly due to iatrogenic induced prematurity. From the maternal point of view, the surgical complications (hysterectomy, bladder and bowel injury) and the obstetric haemorrhage are significant with up to 9 in 10 patients requiring blood transfusion [1].

In order to reduce the morbidity and mortality rates the prenatal diagnosis is essential. The detection of PAS antenatally allows us to make a detailed plan for delivery. The delivery for women diagnosed with PAS has been proven to be safer if it's done in a specialist centre by a team with expertise in PAS management and pelvic surgery [1,4,5].

Once PAS diagnosed by transabdominal/transvaginal ultrasound scan (TAUSS, TVUSS) or magnetic resonance imaging (MRI), the patients should have a planned caesarean section at 35+0-36+6w of gestation. This gestation is considered the best timing in order to achieve a reasonable fetal maturity and to reduce the risk of unscheduled delivery. (1,6) These cases should be managed by a multidisciplinary team, necessarily including senior anaesthetists, obstetricians and gynaecologists [1,4,5].

However, the diagnosis of PAS could be missed if the patient has no history of previous CS and the sonographer is not trained for detecting this condition. These patients are not usually referred to a fetal medicine specialist.

That`s why is crucial to suspect the PAS in any case of previous uterine surgery or curettage, especially associated with low lying placenta. A history of previous surgical management of retained products of conception (RPOC) with significant post-partum haemorrhage (PPH), or manual removal of the placenta should increase our suspicion and the patient should be referred to a fetal medicine specialist with expertise in PAS diagnosis for assessment. The diagnosis can accurately be made by TAUSS/TVUSS but requires special training in order to detect the signs of abnormal placentation.

Case Report

We present a case of undiagnosed PAS in a patient with two previous vaginal deliveries and three miscarriages, no previous caesarean section (CS) or other uterine surgery. She had surgical management of retained products of conception (D&C) twice, after each delivery. After the last delivery she had a massive obstetric haemorrhage due to retained placenta and required x3 units of blood transfusion. The patient consented for publication of this article.

She had a background of asthma and betathalassemia intermedia and her haemoglobin (Hb) at 26weeks gestation was 81 g/l, ferritin 102 microgram/l, platelets 270,000/ml, Vit B12 186 picograms/ml. She received two units of packed red cells (PRC) at that time. At 29 weeks gestation the Hb was 99g/l.

She had a history of fetal growth restriction in her last pregnancy so she had serial growth scans done during this pregnancy. She was diagnosed during the routine anomaly scan at 20weeks with anterior low-lying placenta. No suspicion of PAS was raised. At 36 weeks gestation the placenta was still at 1.7cm from the os, so an elective CS was booked at 38 weeks. She was not seen in Fetal Medicine Department as there was no suspicion of PAS and the sonographers who are doing the growth scans are not trained for diagnosis of PAS.

She was booked for elective CS at 37 weeks and 3 days gestation for her low-lying placenta. We were prepared to use cell salvage due to her underlying betathalassemia.

During the planned CS the low-lying placenta was confirmed so the incision went through the placenta in order to deliver the

baby. After delivery the placenta was very difficult to remove and she started to bleed significantly. We managed to remove the placenta in a "piece meal" fashion but there were some small pieces of placental tissue left in place and some myometrial areas were partially torn so the haemostasis was very difficult. We inserted a Bakri balloon for haemostasis and a Robinson drain. She received oxytocin 10 units bolus and continuous infusion for 4 hours, ergometrine, 4 doses of carboprost and misoprostol 800 mcg. The blood loss was 1.9l and she received 305 ml cell salvaged blood transfusion. She received prophylactic antibiotics for 7 days (coamoxiclav 1.2g IV twice daily for 3 days and then orally for another 4 days).

After delivery the patient recovered slowly. She didn`t require further blood transfusion or any other medication. The Bakri balloon was removed 24h after delivery. The drain was removed only after 6 days due to ongoing serous-sanguinolent drainage (between 175-250 ml/day). There was no further significant bleeding or infection. The patient was discharged on day 9 post-delivery. She continued to have a brownish discharge for about 3 weeks after delivery but no heavy bleeding and no signs of infection.

We informed the patient that she has a high risk of PAS in all her future pregnancies.

Conclusion

There is a significant risk of PAS after surgical management of RPOC, especially after repeated D&C procedures. Sometimes the primary cause of RPOC is a focal PAS. [1,7-9]

In our local protocol the patients with placenta praevia are referred to Fetal Medicine Department for assessment for PAS only if they had previous CS.

We consider that all patients with previous uterine surgical procedures (including D&Cs) should be considered for ultrasound assessment for the possibility of PAS by sonographers with expertise in PAS diagnosis, not only those with previous CS.

This case report highlights the high risk of maternal morbidity in the setting of an undiagnosed PAS and the importance of prenatal diagnosis.

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