

CASE STUDY

A first trimester scan may reveal the presence of placenta accreta. Absence of the anterior uterine wall during caesarean section: An unexpected placenta accreta that was treated conservatively

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Objective: Placenta accreta spectrum (PAS) is a rare condition, but it is a potential life threatening obstetric event.

Case report: A second-time mother, 32°years old, has had a caesarean section before. At 11°weeks, a doubt about scar pregnancy was posed but not confirmed at subsequent serial ultrasound evaluations. A caesarean section was performed at 38.4°weeks for breech presentation. A placenta accreta, diagnosed during surgery and confirmed by histological evaluations, was visible at uterine examination with a lacuna in the anterior uterine wall. After fetal extraction, the surgeons opted for conservative management. Subsequent clinical and ultrasound follow-up described a patient in a good state of health with a progressively reduced intrauterine placenta residual.

Conclusion: (1) Even in the absence of typical second- or third-trimester ultrasound signs, first trimester ultrasound played a role in posing the suspect of PAS. (2) Conservative management could be a safe option in cases of undiagnosed PAS, even if reported in the literature as a correlation with possible subsequent complications, which must be explained to the patient with adequate counseling.

Keywords: placenta accreta, accretism, conservative management, caesarean section

Introduction

Placenta accreta spectrum (PAS), whose prevalence ranges from 0.01 to 1.1%, is caused by excessive trophoblast invasion within the myometrium (1, 2). Different risk factors are identified: the most common is a previous caesarean section, while maternal age over 35°years old, high parity, other uterine surgeries, infertility, and *in vitro* fertilization are also described as increasing the risk (3, 4).

Considering the elevated risk of post-partum hemorrhage and the frequently required hysterectomy to prevent maternal death (5), PAS represents a life-threatening obstetric emergency (4–6). Therefore, an early diagnosis

could allow a safer delivery, and ultrasound signs could be useful to pose a suspect and reduce maternal morbidity and mortality (7, 8). Specifically, ultrasound in the first trimester found the gestational sac implanted on the anterior wall of the inferior segment of the uterus with a placental development near the previous scar (9).

This early examination may predict maternal risk thanks to a first trimester diagnosis of PAS (10). Also, the typical signs recognized in the second and third trimesters could be detected in the first trimester, such as placental lacunae, abnormal bladder-uterine space, and loss of the retroplacental clear zone (9). Therefore, an accurate ultrasound examination, using a combined trans-abdominal and trans-vaginal approach, is recommended for all pregnant

women with a history of uterine surgery in the second trimester and represents the diagnostic gold standard (9). Other imaging methods, such as magnetic resonance imaging could be used, but their role was uncertain.

In the case of PAS, a caesarean section is usually scheduled for delivery, involving expert surgeons; possible options are hysterectomy or segmental excision with subsequent restoration of physiology. To avoid the morbidity associated with hysterectomy and to preserve fertility, a conservative approach could be used, but this approach is associated with a subsequent prolonged follow-up and the risk of unwholesomeness (11). If PAS is unexpected, leaving the placenta in place is acceptable, especially if hemorrhage cannot be controlled, as in the case of extensive invasions of adjacent organs and/or involvement of pelvic vessels (10).

There is limited evidence to support conservative management due to the risk of infection, tardive hemorrhage, and the need for subsequent surgery. These patients should be monitored longitudinally for long period of time (8).

We decided to share our experience to emphasize the importance of performing an early first trimester ultrasound to rule out PAS because we were faced with an unexpected placenta accreta due to the absence of typical second trimester ultrasound signs, diagnosed at the time of caesarean section, and treated conservatively with success.

Case report

An Indian woman in her second pregnancy, 32°years old, with a previous caesarean section due to malposition in labor, comes to our attention. In her family history, it was reported that her mother was affected by diabetes. She was diagnosed with hypothyroidism. No other disease or surgery complicated her personal history before pregnancy. She had a body mass index (BMI) of 22.7°kg/m².

In the first trimester, at 11°weeks, a suspicion of scar pregnancy was posed but not confirmed at subsequent serial ultrasound evaluations. The placenta was described as being placed into the anterior-fundal uterine wall and showing no signs of acretism at the second and third trimester scans (Figures 1A, B). Pregnancy development was regular, and the patient was admitted to our department at 38.4 gestational weeks for a planned caesarean delivery for breech presentation. At laparotomy, a diastasis of the previous uterine hysterotomy was found, along with a misdiagnosed placental acretism (Figure 1C) and a suspected bladder infiltration.

After fetal extraction, the surgeon tried to detach the placenta, but they only managed to withdraw multiple fragments without obtaining a complete placenta removal due to pathological adhesion and massive hemorrhage, so they opted for conservative management. Uterotonic therapy with oxytocin and sulprostone was administered, along with an infusion of tranexamic acid. An intrauterine

balloon was placed. Blood, platelets, plasma, and fibrinogen were transfused.

A multispectrum antibiotic therapy was started. Blood loss was 3700°mL. A tomography scan was performed after surgery, which excluded active bleeding.

A progressive restoration of maternal well-being was observed, and the patient was discharged after 15°days. The subsequent clinical and ultrasound follow-up was regular, with a progressive reduction of intrauterine material.

Histological examination of the multiple fragments of placenta confirmed placenta accreta.

Discussion

Although PAS is a rare condition, complicating 0.01–1.1% of pregnancies, (1, 2) it is a potentially life-threatening event (6). Our patient only presents a previous caesarean section as a risk factor; she is 32°years old and in her second spontaneously conceived pregnancy.

Cal described a series of cases in which an ultrasound at 6–8°weeks allowed for the diagnosis of PAS by taking into account the relationship between the caesarean scar, gestational sac, and anterior uterine wall. He claimed that between 11 and 14°weeks, the uterine sac's relative movement toward the uterine cavity could mimic a healthy intrauterine pregnancy (10). Our patient performed an ultrasound in the first trimester, at 11°weeks, in which a scar pregnancy suspect was posed but not subsequently confirmed.

The missed diagnosis could be correlated with the first evaluation at the end of the first trimester. However, considering this initial hypothesis, she underwent serial ultrasound examinations, which did not find typical PAS signs (7, 9), as shown in Figures 1A, B.

Placenta accreta spectrum (PAS) was discovered during a repeat caesarean section for breech presentation for these reasons. In consideration of the massive hemorrhage, the suspected bladder infiltration, and in particular the impossibility to detach all the placenta from the uterine wall, the surgeons opted for a conservative management, leaving part of the placenta *in situ* (11).

Although it is reported in the literature that conservative management presents high maternal risk, such as intrauterine infection, placental abscess, sepsis, and unpredictable hemorrhage, in this case we report a reduction of intrapartum blood loss and no further complications (11). Furthermore, caesarean hysterectomy, which is the standard procedure in the event of a PAS diagnosis, has reported mortality rates of 5–7% and morbidity rates of 40–50% (12).

Considering the potential long-term risk of conservative management (11), the patient has undergone a clinical and ultrasound follow-up, and she is in good condition at the moment.

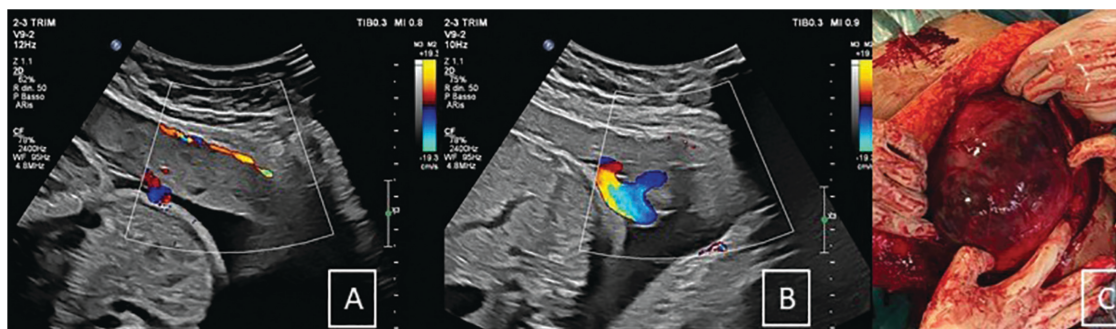


FIGURE 1 | (A, B) Ultrasound images of placenta at third trimester scan. **(C)** Absence of a part of anterior uterine wall due to misdiagnosed placenta accreta.

Conclusion

Our conclusions, based on our study, are as follows:

An early first trimester ultrasound, at 6–8°weeks, played a role in posing the suspect of PAS, even in the absence of typical second- or third-trimester ultrasound signs; a “tardive” first trimester evaluation, on the other hand, could miss the diagnosis.

Future studies with a larger population should be conducted to support the hypothesis that conservative management could be a safe option in cases of undiagnosed PAS, although it is reported in the literature that there is a correlation with possible subsequent complications, which must be explained to the patient with adequate counseling.

Author contributions

PA and MS significantly contributed to the creation of the work’s concept or design as well as its data collection, analysis, and interpretation, as well as to its writing. PF and GB critically revised the manuscript to make sure it contained significant intellectual material. Data gathering and critical revisions of the manuscript were carried out by FC. The final draft of the manuscript was read and approved by all authors.

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