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### RESEARCH ARTICLE

## PLACENTA ACCRETA SPECTRUM IN AN UNSCARRED UTERUS: A RARE AND UNEXPECTED OBSTETRIC EMERGENCY

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#### Abstract

Placenta accreta spectrum (PAS) represents abnormal trophoblastic invasion into the myometrium and is a major cause of obstetric hemorrhage and maternal morbidity. It is most commonly associated with prior uterine surgery and placenta previa. Occurrence in a primigravida with an unscarred uterus and no identifiable risk factors is rare and frequently unsuspected. We report a case of a 24-year-old unregistered primigravida at 38 weeks of gestation who presented with severe preeclampsia and acute fetal distress necessitating emergency cesarean delivery. Intraoperatively, the placenta failed to separate, raising suspicion of PAS. Given minimal hemorrhage and hemodynamic stability, conservative management with the placenta left in situ was undertaken. Postoperative imaging suggested placenta increta/percreta. A single dose of methotrexate was administered, followed by spontaneous vaginal expulsion of the placenta on postoperative day three. The patient remained clinically stable, avoided hysterectomy, and fertility was preserved. This case highlights the importance of intraoperative vigilance and individualized management in unexpected PAS.

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#### Introduction:-

Placenta accreta spectrum (PAS) refers to abnormal placental adherence or invasion into the uterine myometrium due to defective decidualization at the implantation site. It encompasses placenta accreta, increta, and percreta depending on the depth of invasion into the uterine wall<sup>1</sup>. PAS is a major cause of obstetric hemorrhage and contributes significantly to maternal morbidity and peripartum hysterectomy. The incidence of PAS has increased markedly in recent decades, largely due to rising cesarean delivery rates worldwide. Current estimates suggest an incidence of approximately 1 in 533 pregnancies<sup>1,2</sup>. The most significant risk factors include previous cesarean section, placenta previa, uterine curettage, myomectomy, multiparity, advanced maternal age, and assisted reproductive technologies<sup>3,8</sup>. However, PAS occurring in primigravida patients with an unscarred uterus and no identifiable risk factors is rare. Such cases are frequently unsuspected antenatally and may only be recognized intraoperatively during delivery, particularly in unregistered pregnancies with limited antenatal surveillance. The objective of this report is to highlight the occurrence of PAS in an unscarred primigravida uterus and to discuss the diagnostic challenges and conservative management strategies in an emergency obstetric setting.

**Case Report: -**

A 24-year-old unregistered primigravida at 38 weeks of gestation presented to the labor room with complaints of severe headache, blurred vision, and abdominal pain. On examination, her blood pressure was 170/100 mmHg, and she was diagnosed with severe preeclampsia. Antihypertensive therapy was initiated. The patient had irregular antenatal follow-up, with visits only at 10 weeks and 32 weeks of gestation. No detailed anomaly scan or targeted placental evaluation had been performed. She had no history of cesarean delivery, uterine curettage, myomectomy, placenta previa, or assisted reproductive treatment. Fetal monitoring revealed a non-reactive non-stress test with late decelerations. Breech presentation was noted. Due to acute fetal distress and severe preeclampsia, an emergency lower segment cesarean section was performed within one hour of admission. A live male baby weighing 2.2 kg was delivered. Estimated intraoperative blood loss was approximately 800 ml, and one unit of packed red blood cells was transfused.

Following delivery, controlled cord traction failed to deliver the placenta. Gentle manual exploration revealed dense placental adherence with no identifiable cleavage plane between the placenta and the myometrium (figure 1). Further attempts at removal were avoided due to suspicion of placenta accretaspectrum. Despite abnormal placental adherence, there was no massive hemorrhage, and the patient remained hemodynamically stable with adequate uterine tone. After consultation with senior obstetricians, a decision for conservative management was made. The umbilical cord was ligated close to its placental insertion and cut, and the placenta was left in situ (figure 2). The uterine incision was closed after ensuring adequate hemostasis (figure 3). Postoperatively, the patient was closely monitored with serial complete blood counts and inflammatory markers to detect possible infection or hemorrhage. She remained afebrile and hemodynamically stable and did not require ICU admission. Ultrasonography performed on postoperative day two demonstrated retained placental tissue with increased vascularity suggestive of invasive placentation consistent with placenta increta. Magnetic resonance imaging further suggested deeper myometrial invasion. Following multidisciplinary discussion, a single dose of methotrexate was administered as adjunctive therapy. On postoperative day three, the patient spontaneously expelled the placenta vaginally in toto without significant hemorrhage or septic complications (figure 4). Both mother and neonate recovered well and were discharged in stable condition.

**Figure 1:-Demonstating adherent placenta**



**Figure 2 : Demonstrating placenta left insitu.**

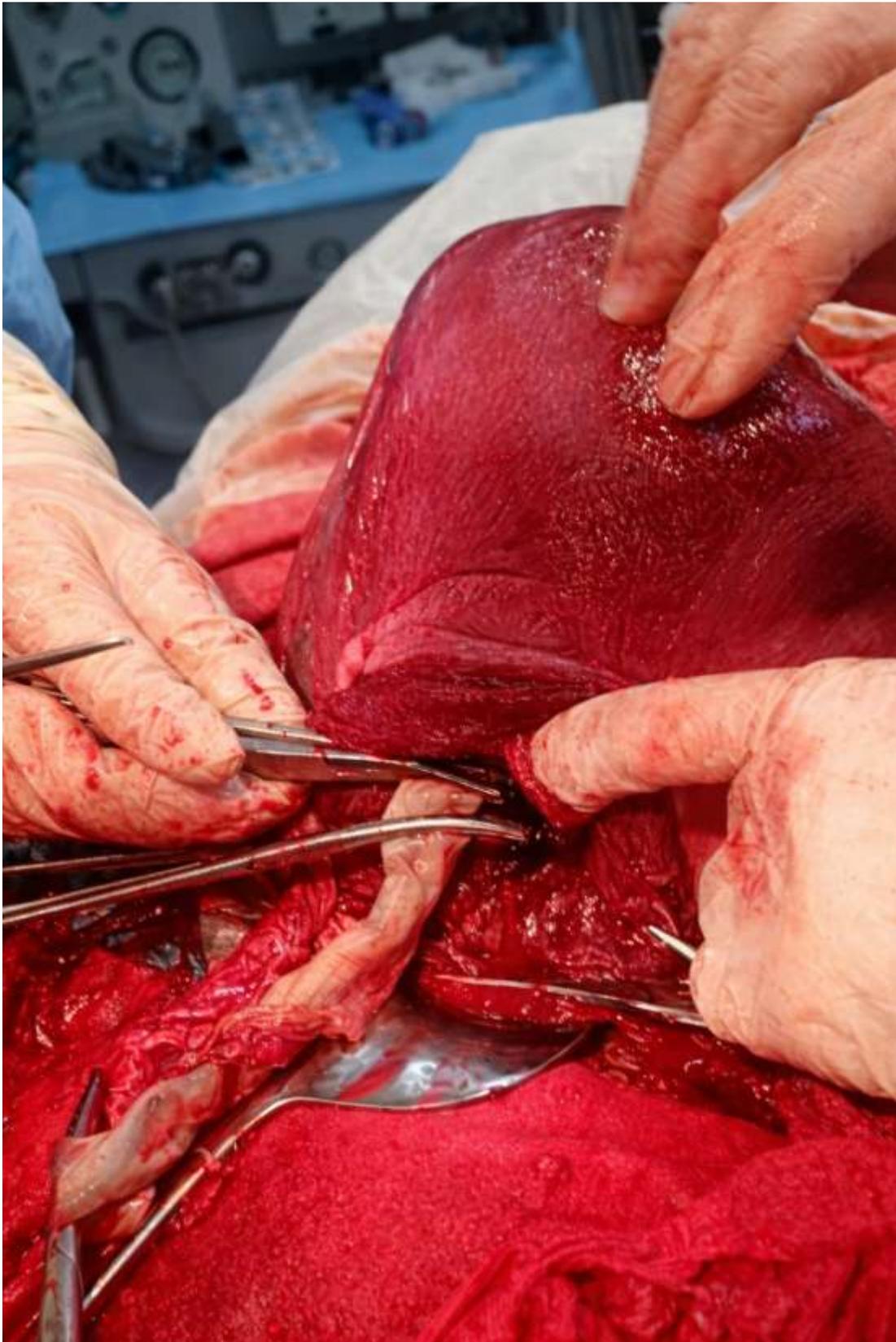


Figure 3 – Demonstrates uterine closure



**Figure 4 – placenta expelled in total .****Discussion:-**

Placenta accreta spectrum is typically associated with uterine scarring and placenta previa<sup>1,3</sup>. Its occurrence in a primigravida with an unscarred uterus and no identifiable risk factors is uncommon and may remain undetected until delivery.

**Antenatal Diagnosis: -**

Ultrasonography with color Doppler remains the primary screening modality for PAS and demonstrates high sensitivity when performed by experienced operators<sup>4,8</sup>. Typical findings include loss of the retroplacental clear zone, placental lacunae, myometrial thinning, and abnormal vascularity. Magnetic resonance imaging (MRI) serves as a useful adjunct for evaluating the depth of invasion and possible extrauterine extension<sup>4,10</sup>. In the present case, irregular antenatal follow-up and absence of classical risk factors reduced clinical suspicion, resulting in missed antenatal diagnosis.

**Intraoperative Diagnosis: -**

Unexpected PAS is often diagnosed intraoperatively when the placenta fails to separate following delivery and no clear cleavage plane is identified between the placenta and uterine wall<sup>3</sup>. Forceful removal of an abnormally

adherent placenta may lead to catastrophic hemorrhage. Prompt recognition and avoidance of aggressive traction are therefore essential.

**Conservative Management: -**

Cesarean hysterectomy with the placenta left in situ remains the standard recommended management for PAS<sup>6,12</sup>. However, conservative management may be considered in selected patients who are hemodynamically stable and wish to preserve fertility<sup>6,7</sup>. In the present case, conservative management was chosen due to minimal intraoperative hemorrhage, hemodynamic stability, primigravida status, and the patient's desire for fertility preservation.

**Role of Methotrexate: -**

The use of methotrexate (MTX) in PAS management remains controversial. MTX acts by inhibiting rapidly dividing trophoblastic cells and has been proposed to accelerate placental involution when the placenta is left in situ. However, at term trophoblastic proliferation is minimal, and several authors question the biological rationale for MTX use in PAS<sup>5,6,14</sup>. Current FIGO guidelines do not recommend routine MTX administration due to insufficient evidence supporting its effectiveness<sup>6</sup>. Nevertheless, some case reports and small series describe successful outcomes with adjunctive MTX therapy<sup>7,13,15</sup>. In this case, MTX was administered following imaging confirmation of retained invasive placental tissue. Spontaneous placental expulsion occurred on postoperative day three without hemorrhagic or septic complications. While a direct causal relationship cannot be definitively established, the favorable outcome supports individualized decision-making in selected cases.

**Diagnostic Limitations: -**

Histopathological examination demonstrating chorionic villi invading the myometrium remains the gold standard for PAS diagnosis. However, in conservatively managed cases where hysterectomy is avoided, histological confirmation is not feasible. Therefore, diagnosis in this case relied on intraoperative findings and imaging correlation.

**Conclusion: -**

Placenta accreta spectrum may rarely occur in primigravida patients with unscarred uteri and no identifiable risk factors. Such cases may remain undiagnosed antenatally, particularly in unregistered pregnancies with limited obstetric surveillance. Early recognition of abnormal placental adherence during surgery and avoidance of forceful placental removal are critical to prevent life-threatening hemorrhage. Although cesarean hysterectomy remains the standard treatment, conservative management may be feasible in carefully selected hemodynamically stable patients managed in tertiary care settings. As this report represents a single case, the findings cannot be generalized to all PAS cases. Long-term reproductive outcomes were not available due to limited follow-up. Further studies are required to better define optimal management strategies and long-term outcomes in conservatively managed PAS.

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