Section: Obstetrics and Gynaecology

Case Report

CAESAREAN SCAR PREGNANCY – A DIAGNOSTIC CHALLENGE

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ABSTRACT

Background: A caesarean scar pregnancy is an ectopic pregnancy that occurs at the cervico-isthmic location, characterized by scarring. This type of ectopic pregnancy is rare, affecting about 1 in every 2000 pregnancies. Due to the substantial risk of massive hemorrhage, immediate management upon diagnosis is crucial, as it can have serious implications for the patient's future reproductive health and may even endanger her life.
Case presentation: We reported here a case of caesarean scar pregnancy.
Conclusion: Uterine scar ectopic pregnancies present a diagnostic challenge, requiring healthcare providers and radiologists who care for women with related risk factors to remain highly vigilant during imaging and follow-ups.
Keywords: Caesarean scar, ectopic pregnancy, hemorrhage

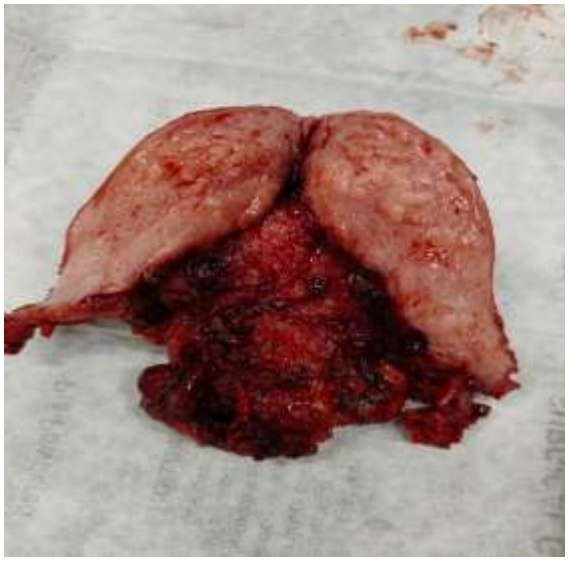
INTRODUCTION

A caesarean scar pregnancy is an ectopic pregnancy that occurs at the cervico-isthmic location, characterized by scarring. This condition involves the implantation of the gestational sac within the scar tissue. It poses a significant risk of uterine rupture and severe bleeding, often resulting in hysterectomy and a high mortality rate, necessitating prompt intervention upon diagnosis. This type of ectopic pregnancy is rare, affecting about 1 in every 2000 pregnancies.[1,2] Women experiencing symptomatic cesarean scar pregnancy typically report lower abdominal pain and vaginal bleeding during the first trimester.[3] Due to the substantial risk of massive hemorrhage, immediate management upon diagnosis is crucial, as it can have serious implications for the patient's future reproductive health and may even endanger her life. This report presents a unique case of a cesarean scar ectopic pregnancy that was initially misdiagnosed as an inevitable abortion, but timely clinical assessment and intervention ultimately saved the patient's life.

Case Report

A 34-year-old woman, G2P1L1, at 10 weeks of gestation, who had undergone a lower segment cesarean section (LSCS) five years prior due to fetal distress, presented to the emergency department with vaginal bleeding for the past seven days. She reported symptoms, including weakness, dizziness, headache, nausea, and vomiting for the last week. Notably, she did not experience any abdominal pain or discomfort. Her menstrual cycles had been regular prior to this pregnancy, and her estimated gestational age aligned with her last menstrual period. She had a history of receiving two units of whole blood at a local hospital two weeks before her admission due to bleeding and severe anemia. Aside from the previous LSCS, her medical and surgical histories were unremarkable. Upon admission, her overall condition was moderate, with stable vital signs. A review of her abdomen revealed no guarding, tenderness, or pelvic masses. A speculum examination showed an open cervical os with minimal bleeding. On a vaginal examination, the uterus was enlarged with fullness noted in the lower segment and cervical region, leading to a clinical diagnosis of inevitable abortion. Routine blood tests and an ultrasound were ordered. The ultrasound

indicated a single live gestation with a crown-rump length corresponding to 10 weeks and 4 days. Basic investigations revealed hemoglobin levels at 8.1 g/dL, while platelet and white blood cell counts were normal. The patient then experienced acute vaginal bleeding and was prepared for emergency evacuation and check curettage. During the procedure, she encountered severe bleeding, prompting administration of oxytocics, methylergometrine, and misoprostol, yet the bleeding persisted.



Although check curettage was performed, the patient continued to bleed profusely while her vital signs worsened. Considering the possibility of a cesarean scar pregnancy complicated by uterine perforation, the decision was made for an exploratory laparotomy. Sufficient blood and blood products were arranged, and informed consent was obtained. The patient was intubated for general anesthesia. Intraoperative findings revealed bulging at the lower pole of the uterus, but the scar was intact with no signs of perforation. Given the patient's unstable hemodynamic state and the diagnosis of cesarean scar pregnancy, a hysterectomy was deemed necessary and was performed without complications. Hemostasis was successfully achieved. The patient remained intubated and required ventilatory support for two days in the surgical intensive care unit, during which she received a total of three units of whole blood, two fresh frozen plasma (FFP) units, and one packed cell volume (PCV). Postoperatively, she was transfused with an additional three units of whole blood. She was extubated on the third day and subsequently transferred to the postoperative ward. After receiving six units of whole blood, two FFP units, and one PCV, with her hemoglobin level reaching 11.3 g/dL, she was discharged on the tenth postoperative day.

DISCUSSION

Although rare at an incidence of 0.05%, CSPs can be a life threatening event. Patients with a history of multiple cesareans are encouraged to present for an early viability ultrasound in future pregnancies to assess pregnancy location.[4,5]

Sonographically, differentiating between an IUP implanted at the cervico-isthmic junction and a CSP can be difficult. When the GS is low-lying, differentiation between an ongoing miscarriage, cervical pregnancy, ongoing low-implanted pregnancy and CSP can be difficult.

Timor-Tritsch et al,[6] study was a retrospective case series of 26 patients with known CSP. They describe seven criteria for diagnosing CSP with TVUS. These support the RCOG's recommendations and include an empty cavity, gestation sac embedded in the scar, thin myometrium layer between the pregnancy and bladder, closed cervical canal and scar vascularity.

TVS is the typical first-line imaging tool, but MR imaging is useful for inconclusive cases. The Society for Maternal-Fetal Medicine (SMFM) (2020) considers sonography-guided vacuum aspiration alone, but not sharp curettage, to be suitable.

In some instances, hysterectomy is required or may be elected in those not desiring future fertility. In our patient patient differential diagnosis includes cervical pregnancy, inevitable abortion and scar ectopic

pregnancy. Medical management is useful for stable patients. Our patient was haemodynamically not stable so surgical exploration was the only option available.

Surgical treatment, with excision of scar and removal of the gestation which offers an opportunity to repair the uterine defect and a chance at future fertility. In our patient as diagnosis was not ascertained whether cervical or scar ectopic and haemodynamically patient was deteriorating so descision of hysterectomy was taken.

Despite a live birth rate of 57% in one systematic review, 63% of women managed expectantly required hysterectomy for the management of life-threatening hemorrhage following spontaneous uterine rupture or abnormally adherent placenta.[7]

The high morbidity and risk of death do not justify expectant management of a viable scar pregnancy.

CONCLUSION

Uterine scar ectopic pregnancies present a diagnostic challenge, requiring healthcare providers and radiologists who care for women with related risk factors to remain highly vigilant during imaging and follow-ups. An oversight in diagnosis, coupled with delayed treatment, can result in uterine rupture, severe bleeding, and even maternal fatalities. Access to transvaginal ultrasound technology and proper training should be ensured, even in settings with limited resources. There should be a screening tool in place to assess at-risk patients, along with a protocol for referring ambiguous cases to MRI at the point of care. There is no consensus on the preferred treatment method.

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