ORIGINAL RESEARCH PAPER

Obstetrics & Gynaecology

CATASTROPHIC UTERINE FUNDUS RUPTURE DUE TO UNDIAGNOSED PLACENTA PERCRETA IN A 13-WEEK PREGNANCY: A RARE CASE OF VIABLE EXTRAUTERINE FETUS WITH HEMOPERITONEUM

KEY WORDS: Uterine Rupture, Placenta Percreta, Early Pregnancy, Hemoperitoneum, Hysterectomy.

Dr. Nitika Sharma MS OBG,

Dr Vivek Sharma MS Surgery

ABSTRACT

Background: Uterine rupture in early pregnancy is rare and potentially fatal. It may result from interstitial pregnancy or morbidly adherent placenta, such as placenta percreta, even without typical risk factors. **Case Presentation:** A 30-year-old gravida 3 para 3 woman presented at 13 weeks' gestation with abdominal pain and shock. Ultrasound revealed a viable fetus outside the uterus and massive hemoperitoneum. Laparotomy showed uterine fundus rupture, a free-floating fetus, and placenta percreta. A peripartum hysterectomy with bilateral salpingectomy was performed. The patient recovered uneventfully. **Conclusion:** Early pregnancy rupture due to placenta percreta can occur without classic risk factors. Timely diagnosis and surgical management are vital to reduce maternal risk.

INTRODUCTION

Interstitial pregnancy is a rare and potentially life-threatening form of ectopic pregnancy in which the gestational sac implants in the interstitial portion of the fallopian tube, the segment that traverses the muscular wall of the uterus. Although it accounts for only 2–4% of all ectopic pregnancies in the general population, its clinical significance lies in its diagnostic difficulty and high risk of catastrophic uterine rupture due to the highly vascularized nature of the surrounding myometrium.[1,2] In certain populations, such as women undergoing assisted reproductive technologies like in vitro fertilization (IVF), the prevalence of interstitial pregnancy has been reported to rise significantly, up to 11%.[3]The condition is associated with significant maternal morbidity and a reported mortality rate of 2–2.5%, making early diagnosis and prompt intervention crucial for favorable outcomes.[3,4] However, diagnosis is often delayed due to the relatively late presentation of symptoms, as the interstitial portion of the tube has a greater distensibility compared to other parts. Rupture, when it occurs, is often catastrophic, typically between 8 and 16 weeks of gestation, and frequently leads to massive hemoperitoneum and hemorrhagic shock.

Case Presentation

A 30-year-old woman, gravida 3 para 3, with a history of three full-term vaginal deliveries, presented to the labor room at 13 weeks and 3 days of gestation with complaints of sudden-onset, severe lower abdominal pain and dizziness. She also reported amenorrhea for the past three months. The patient appeared pale, was hypotensive (BP 80/50 mmHg), tachycardic (pulse rate 126 bpm), and in a state of clinical shock. There was no history of trauma, vaginal bleeding, or recent surgical procedures. The patient had no prior antenatal checkups for the current pregnancy. Her previous three deliveries had been uneventful and vaginal in nature. There was no history of infertility, assisted reproductive techniques, or previous ectopic pregnancy. She had no known comorbidities and was not on any regular medication. On general physical examination, the patient was conscious but restless and markedly pale. Pulse was thready, and capillary refill time was prolonged. Respiratory rate was 26 breaths/minute, and oxygen saturation was 94% on room air. Abdominal examination revealed guarding, tenderness, and rigidity predominantly in the lower abdomen. There was marked rebound tenderness and evidence of peritoneal irritation. Bowel sounds were absent. Per speculum examination was unremarkable with no active bleeding or discharge. On per vaginal examination, the uterus was anteverted and corresponded to approximately 14 weeks' size. Cervical motion tenderness was present, and fullness with tenderness was noted in all fornices, suggestive of hemoperitoneum. A positive culdocentesis further supported intra-abdominal bleeding. Bedside transabdominal ultrasound revealed a viable intra-abdominal fetus measuring 13 weeks and 1 day gestational age, located in the right side of the pelvis, outside the uterine cavity. The uterus appeared empty with disruption noted at the fundal region. Moderate to massive hemoperitoneum was visualized. These findings were suggestive of a ruptured extrauterine pregnancy, possibly secondary to uterine rupture with intra-abdominal extrusion of a viable fetus. Laboratory tests revealed hemoglobin of 6.2 g/dL, leukocytosis (WBC count 18,000/mm^3), and raised serum lactate, indicating hypovolemic shock. Crossmatch was sent, and the patient was prepared for emergency exploratory laparotomy. Intraoperatively, approximately 1.5 liters of blood was noted in the peritoneal cavity. A fetus of approximately 13 weeks' gestation was found free-floating in the abdominal cavity, enclosed within partially ruptured membranes. The uterus showed a large rent at the fundus, and the placenta was abnormally adherent and invading the myometrium and serosa, consistent with placenta percreta. Both fallopian tubes were grossly abnormal and unhealthy. Given the extent of placental invasion and uncontrolled bleeding, a peripartum hysterectomy with bilateral salpingectomy was performed. Four units of packed red blood cells were transfused intraoperatively. Postoperatively, the patient was managed in the intensive care unit. She was extubated on postoperative day one and showed stable hemodynamic recovery. Spontaneous fundal rupture of the uterus in a 13-week pregnancy secondary to undiagnosed placenta percreta, resulting in extrauterine location of a viable fetus and hemoperitoneum.

DISCUSSION

In our case, the diagnosis was made only after the patient presented with hemodynamic instability at 13 weeks of gestation, a scenario highlighting the diagnostic challenge this entity presents. Several case reports echo the difficulty in early recognition of interstitial pregnancies. Ungureanu et al[5] described a patient presenting with pelvic pain and hypotension at 8 weeks of amenorrhea, diagnosed with ruptured interstitial pregnancy via ultrasonography and managed successfully by corneal wedge resection. Similar timely diagnosis and management were emphasized by Boujida et al,[6] who also utilized transvaginal ultrasound to detect a laterally located gestational sac with a thin myometrial rim—a hallmark of interstitial implantation. In contrast, Abbas et al[7] and Sharma et al[8] detailed cases where the diagnosis was made intraoperatively following a high clinical suspicion based on non-specific imaging findings. Sharma et al. further illustrated how imaging may be misleading, with MRI suggesting multiple differential diagnoses including gestational trophoblastic disease. This supports the notion that interstitial pregnancy often mimics other pathologies, necessitating a strong index of suspicion,

especially when clinical and biochemical findings are discordant with imaging.Our case shares similarities with reports by Frezgi et al[9] and Bhahall et al,[10] where second-trimester rupture occurred, leading to life-threatening intra-abdominal hemorrhage and fetal extrusion. Frezgi's cases[9] involved massive hemoperitoneum with intra-abdominal fetal demises at 16 weeks, mirroring the late gestational rupture seen in our patient. These instances underscore the high mortality risk—reported as high as 2.5%—and the critical need for early detection. Management typically involves surgical intervention, with options ranging from cornuostomy, wedge resection, to hysterectomy in catastrophic cases. Medical management with methotrexate, as noted by Ungureanu et al., may be possible in stable, early-diagnosed cases. However, in cases like ours, emergency laparotomy remains the mainstay due to the acute presentation and risk of maternal collapse.This case emphasizes the need for clinicians to maintain vigilance for interstitial pregnancy, particularly in women with risk factors or atypical presentations, and reinforces the life-saving value of prompt surgical intervention.

REFERENCES

1. Kampioni M, Chmaj-Wierzchowska K, Wszolek K, Wilczak M. Interstitial ectopic pregnancy—case reports and medical management. Medicina 2023;59:233.
2. Gincheva D, Hinkova N, Gincheva V, Vanov A. A Rare Case of an Interstitial Pregnancy. Journal of IMAB 2024;30:5636-41.
3. Klimek M, Skotniczny K, Banas T, Wicherek L. A case of left interstitial pregnancy after left adnexectomy: why surgical management? 2006.
4. Surbone A, Cottier O, Vial Y, Francini K, Hohlfeld P, Achtari C. Interstitial pregnancies' diagnosis and management: an eleven cases series. Swiss medical weekly 2013;143.
5. Ungureanu CO, Stanculea FC, Iordache N, et al. Ruptured Recurrent Interstitial Ectopic Pregnancy Successfully Managed by Laparoscopy. Diagnostics2024.
6. Boujida S, M'Hamdi O, Mahfoud H, Baydada A, Kharbach A. Ruptured interstitial ectopic pregnancy: A case report and review of the literature. Annals of medicine and surgery 2022;79:104076.
7. Abbas AM, Sheha AM, Ali SS, Maghraby AM, Talaat E. A rare presentation of ruptured interstitial ectopic pregnancy with broad ligament hematoma: A case report. Middle East Fertility Society Journal 2017;22:80-3.
8. Sharma SS, Gokhale AV, Agrawal S. A case report on ruptured interstitial ectopic pregnancy: diagnostic dilemma. International Journal of Reproduction, Contraception, Obstetrics and Gynecology 2019;8:2567-71.
9. Okbu Frezgi DS, Berhe Tesfai, Hailemichael Gebremaria. Ruptured Interstitial Ectopic Pregnancy at 16 Weeks of Gestation Resulted in Maternal Near-Misses: Report of Two Cases and Literature Review. International Journal on Obstetrics and Gynecology 2025;5:1-4.
10. Bahall V, Cozier W, Latchman P, Elias SA, Sankar S. Interstitial ectopic pregnancy rupture at 17 weeks of gestation: A case report and literature review. Case reports in women's health 2022;36:e00464.