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Spontaneous Heterotopic Pregnancy Causing Haemorrhagic Shock in an Exclusively Breastfeeding Woman Three Months Postpartum: A Case Report

Husameldin Elhimadie[1]*, Ameen Mustafa[2]

[1]MBBS, MRCGP, National Health Service (NHS), UK, Department of Family Medicine, Primary Health Care Corporation (PHCC), Doha, Qatar
[2]MBBS, MRCGP, National Health Service (NHS), United Kingdom

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***Corresponding author:** Husameldin Elhimadie
MBBS, MRCGP, National Health Service (NHS), UK, Department of Family Medicine, Primary Health Care Corporation (PHCC), Doha, Qatar

Abstract **Case Report**

Heterotopic pregnancy—the simultaneous presence of intrauterine and extrauterine gestations—is rare after spontaneous conception. Diagnostic delay is common because visualising a viable intrauterine pregnancy often provides false reassurance, leading clinicians to miss coexisting adnexal pathology. We report the case of a 30-year-old woman (gravida 3, para 1) who presented three months postpartum while exclusively breastfeeding and developed profound haemorrhagic shock secondary to a ruptured left interstitial ectopic pregnancy coexisting with a viable 8–9-week intrauterine pregnancy. Her history included a spontaneous miscarriage 18 months prior and an uncomplicated term vacuum-assisted delivery three months before admission. She presented with acute lower abdominal pain and diarrhoea, notably without per-vaginal bleeding, following a self-limiting episode of shoulder-tip pain five days earlier. Ambulance vitals demonstrated severe hypotension and tachycardia. Rapidly falling haemoglobin levels and persistent haemodynamic instability prompted an emergency midline laparotomy rather than laparoscopy. Surgery revealed 3.3–3.5 L of haemoperitoneum and a ruptured left interstitial ectopic pregnancy. She underwent a left salpingectomy with interstitial wedge resection and was transfused 8 units of packed red blood cells and 2 pools of platelets under the major haemorrhage protocol. Following intensive care stabilisation, the intrauterine pregnancy remained viable and progressed to an uncomplicated term live birth at 40 weeks. This case emphasises that ovulation can resume within weeks of delivery despite exclusive breastfeeding, that pelvic haemoperitoneum can present with gastrointestinal symptoms without vaginal bleeding, and that a confirmed intrauterine pregnancy does not rule out a concurrent ectopic gestation.

Keywords: Heterotopic pregnancy; Interstitial ectopic pregnancy; Lactational amenorrhoea method; Haemoperitoneum; Postpartum fertility; Primary care diagnostic closure.

BACKGROUND

Spontaneous heterotopic pregnancy is an exceptionally rare clinical entity, with an estimated incidence of approximately 1 in 30,000 pregnancies, in contrast to its significantly higher prevalence following assisted reproductive technology [1,2]. While the majority of contemporary cases occur in the setting of fertility treatments, spontaneous occurrences persist in patients without classic risk factors such as pelvic inflammatory disease, previous tubal surgery, or prior ectopic pregnancy [3,4].

The primary clinical hazard in heterotopic pregnancy is delayed diagnosis [5,6]. Visualisation of an intrauterine pregnancy frequently leads to premature diagnostic closure, distracting clinicians from evaluating the adnexa or searching for occult free fluid [3,5]. This diagnostic challenge is heightened in the early postpartum period, where lactational amenorrhoea may obscure the return of fertility [7,8].

This report describes a rare case of spontaneous heterotopic pregnancy presenting with severe haemorrhagic shock and massive haemoperitoneum in an exclusively breastfeeding woman without traditional ectopic risk factors, culminating in a successful term delivery of the coexisting intrauterine pregnancy.

CASE PRESENTATION

A 30-year-old woman (gravida 3, para 1) presented to the emergency department three months after an uncomplicated term vacuum-assisted delivery. Her obstetric history was notable for a spontaneous first-trimester miscarriage 18 months earlier and one uncomplicated term live birth. She was exclusively breastfeeding, had remained amenorrhoeic since delivery, and was using no contraception. She had no prior history of pelvic inflammatory disease, tubal surgery, or fertility treatment.

Five days prior to admission, she experienced a brief episode of right shoulder-tip pain that resolved spontaneously. A telephone consultation advised blood tests and a pelvic ultrasound, but these were not performed once the symptoms subsided. On the day of admission, she developed acute, severe lower abdominal pain accompanied by diarrhoea, but without per-vaginal bleeding.

Initial vital signs recorded by the ambulance crew confirmed profound shock: blood pressure of 68/48 mmHg, heart rate of 148 beats per minute, respiratory rate of 24 breaths per minute, and oxygen saturation of 97% on room air. Upon arrival at the emergency department, she was pale, cold, clammy, and somnolent, with generalised abdominal tenderness and peritonism.

INVESTIGATIONS

The major haemorrhage protocol was activated immediately alongside point-of-care transabdominal ultrasonography (POCUS). Scanning demonstrated a single live intrauterine pregnancy with a crown-rump length (CRL) of 2.38 cm, corresponding to 8–9 weeks' gestation, with normal fetal cardiac activity. The left ovary was not visualised. The right ovary lay adjacent to an ill-defined mass. Extensive complex free fluid filled the pouch of Douglas and adnexal regions, extending into the paracolic gutters and upper abdomen.

Serial blood tests demonstrated severe acute anaemia, with haemoglobin dropping rapidly over one hour. Quantitative serum β-hCG was omitted preoperatively as immediate surgical intervention took priority; in the presence of severe haemodynamic collapse and a confirmed live intrauterine pregnancy, the result offered no additional diagnostic or therapeutic utility. Ultrasound stills were not archived due to immediate transfer to theatre.

TREATMENT

The patient suffered further haemodynamic deterioration in the emergency department. Laparoscopic surgery was contraindicated due to profound shock and massive haemoperitoneum; therefore, an emergency midline laparotomy was performed under general anaesthesia. Upon entry into the peritoneal cavity, 3.3–3.5 L of liquid blood and blood clot were evacuated.

Intraoperative inspection revealed a ruptured left interstitial/cornual ectopic pregnancy actively bleeding into the peritoneal cavity. The right fallopian tube, both ovaries, and the gravid uterus appeared normal, with no other intra-abdominal pathology identified. A left salpingectomy with interstitial wedge resection was performed to achieve complete haemostasis.

Due to the severity of haemorrhage, resuscitation was conducted under the major haemorrhage protocol, requiring a total transfusion of 8 units of packed red blood cells and 2 pools of platelets. She was transferred to the intensive care unit (ICU) overnight for arterial monitoring and continued resuscitation.

Her postoperative recovery was rapid and uneventful. She was stepped down to the maternity ward on postoperative day 1, at which point her patient-controlled analgesia (PCA), urinary catheter, and abdominal drain were removed. Histopathology confirmed chorionic villi within the tubal specimen, establishing the diagnosis of ectopic pregnancy. Prior to discharge, repeat ultrasound confirmed ongoing viability of the intrauterine pregnancy with normal fetal heart movement and no residual pelvic collections.

OUTCOME AND FOLLOW-UP

She was discharged home in stable condition on postoperative day 2. Discharge medications included ferrous sulphate, folic acid, colecalciferol, along with PRN analgesia. She was instructed to avoid physical exertion, and follow-up was arranged in the high-risk antenatal clinic.

The remainder of her antenatal course was uncomplicated. She delivered a healthy infant at 40 weeks' gestation via spontaneous vaginal delivery, with no maternal or neonatal adverse events.

DISCUSSION

This case highlights the diagnostic challenges of spontaneous heterotopic pregnancy in the early postpartum period. Spontaneous heterotopic pregnancy presenting as a ruptured interstitial ectopic with massive haemoperitoneum three months postpartum in an exclusively breastfeeding woman appears to be exceptionally uncommon. This combination of postpartum status, exclusive breastfeeding, haemorrhagic shock, and successful continuation of the intrauterine pregnancy makes the case particularly noteworthy.

An intrauterine pregnancy measuring 8–9 weeks at 12 weeks postpartum places conception at

roughly 3–4 weeks after delivery. She reported exclusive breastfeeding and remained amenorrhoeic; nevertheless, conception likely occurred approximately 3–4 weeks postpartum, highlighting that return of fertility may precede recognition of the first postpartum menses. Although the Lactational Amenorrhoea Method (LAM) is highly effective when correctly practised, it is not infallible and should not be considered absolute protection against pregnancy [8].

The absence of per-vaginal bleeding was the main diagnostic distraction. Diarrhoea and lower abdominal pain without vaginal bleeding point most clinicians toward gastroenteritis or general surgical pathology. In pelvic haemoperitoneum, blood within the pelvis may irritate adjacent pelvic structures, including the rectosigmoid region, potentially resulting in gastrointestinal symptoms such as diarrhoea [9]. The transient shoulder-tip pain five days earlier was, in hindsight, the only early sign of diaphragmatic irritation from occult intraperitoneal bleeding.

Interstitial ectopic pregnancies sit within the myometrium rather than the free portion of the tube. That surrounding muscle lets the gestation grow further before rupture, so these pregnancies tend to present later and bleed more heavily than ampullary or isthmic ectopics [10].

Identifying a live intrauterine pregnancy readily tempts clinicians toward premature diagnostic closure [3,5]. In a shocked patient with pelvic free fluid, heterotopic pregnancy must stay on the differential until theatre rules it out [5,6].

Open midline laparotomy represented the most appropriate surgical approach in this setting. It gave immediate access and rapid haemostasis without the cardiopulmonary risk of pneumoperitoneum in a shocked patient [4,11]. Keeping direct uterine manipulation to a minimum during resection likely helped preserve the coexisting pregnancy [3,4].

LIMITATIONS

Due to the emergency presentation, bedside ultrasound stills were not archived and baseline quantitative serum β-hCG was omitted prior to surgery. Diagnosis rested on point-of-care ultrasound findings, direct intraoperative inspection, and histopathological confirmation.

LEARNING POINTS

- **Postpartum return of fertility:** LAM is not absolute. Ovulation and conception can occur within 3–4 weeks of delivery despite exclusive breastfeeding.
- **Atypical haemoperitoneum symptoms:** Ruptured ectopic pregnancy can present without per-vaginal bleeding and may manifest with gastrointestinal symptoms, including diarrhoea, likely related to pelvic irritation from haemoperitoneum.
- **Interstitial ectopic risk:** Surrounded by myometrium, interstitial gestations rupture at higher gestational ages, causing rapid, life-threatening haemoperitoneum.
- **Avoid diagnostic closure:** Visualising a viable intrauterine pregnancy on ultrasound does not exclude a coexisting extrauterine gestation.
- **Surgical approach in shock:** In severe haemodynamic collapse with massive haemoperitoneum, emergency open laparotomy allows rapid haemostasis while minimising uterine trauma to preserve a coexisting pregnancy.

STATEMENTS AND DECLARATIONS

Patient Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying clinical details.

Contributorship Statement

All authors contributed to clinical management, manuscript drafting, critical revision for intellectual content, and final approval for publication.

Competing Interests and Funding

The authors declare that they have no competing interests and received no external funding for this work.

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