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Original Article

# TWO LIVES, ONE JOURNEY: SPONTANEOUS RESOLUTION OF HETEROTOPIC PREGNANCY

**Authors:** Lubabatu Abdulrasheed[1], Tensaba Andes Akafa[2], Shafa'atu Ismail Sada[3], Josiah Yakubu[3,] Kingsley Iyoko Iseko[4]

[1]Department of Obstetrics and Gynaecology, Barau Dikko Teaching Hospital, Kaduna
[2]Department of Family Medicine and Geriatrics, Federal University Teaching Hospital Wukari, Taraba State, Nigeria
[3]Department of Obstetrics and Gynaecology, Ahmadu Bello University Teaching Hospital, Zaria
[4]Limi Hospital Abuja, Nigeria.

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## Abstract

**Background:** Heterotopic pregnancy, characterized by the presence of both intrauterine and extrauterine gestations, is a rare and potentially life-threatening condition that poses significant diagnostic challenges.

**Methodology:** We report the case of a 29-year-old woman, G4P2+1, who presented at 9 weeks of gestation with vaginal bleeding, passage of clots, and abdominal pain. Initial evaluation revealed a viable intrauterine embryo and a left adnexal anembryonic gestational sac. Due to the rarity and risks associated with this condition, the patient was managed conservatively with weekly antenatal visits, including serial ultrasounds, urine, and blood tests.

**Results:** By 14 weeks, ultrasound findings confirmed a viable second-trimester pregnancy and indicated the resolution of the ectopic component. The pregnancy continued uneventfully to 37 weeks, culminating in an elective cesarean section and the delivery of a healthy female neonate with good APGAR scores. Postoperative recovery was satisfactory, and the patient was discharged after five days.

**Conclusion:** This case highlights the possibility of spontaneous resolution in heterotopic pregnancy, emphasizing the importance of careful monitoring and a high index of suspicion in women presenting with abdominal pain during early gestation.

**Keywords:** Obstetrics; Heterotopic pregnancy; Conservative management; Diagnostic challenges; Spontaneous resolution

## Introduction

Heterotopic pregnancy (HP), defined as the presence of multiple gestations at two or more implantation locations, poses a unique and serious challenge in obstetric care. While it can involve two ectopic pregnancies, it more commonly features one intrauterine pregnancy alongside an ectopic implantation. The rarity of HP in spontaneous conceptions, with an estimated prevalence of 1 in 30,000, sharply contrasts with the significantly higher incidence seen in pregnancies achieved through assisted reproductive techniques (ART), where rates can climb to 1 in 100. As ART becomes increasingly prevalent in the general population today, the overall estimates of HP prevalence across all pregnancies have risen, leading to figures as high as 1 in 2,600 ( Chan, A.J, et al,2016; Kajdy, A. *et al.*,2021).

Despite these numbers, heterotopic pregnancy remains a diagnostic challenge, particularly in early gestation, and its recognition is vital to reducing the risk of maternal morbidity and mortality. Risk factors—including a history of ectopic pregnancy, pelvic inflammatory disease, abdominal adhesions, and surgical interventions such as reconstructive tubal surgery—further complicate diagnosis and management.

Most cases of HP are identified between 5 and 10 weeks gestation, yet with presenting signs that are often nonspecific—such as abdominal pain, adnexal masses, peritoneal irritation, and vaginal bleeding—the condition frequently goes unrecognized until significant complications arise ( Ayyash, M., *et al* 2022; Kumar, R., & Dey, M.,2015).

Given that up to 33% of patients with HP may present with hemodynamic instability due to ruptured ectopic pregnancies, the need for prompt diagnosis and intervention in both family medicine and gynaecological emergency care settings cannot be overstated. This case report highlights a unique instance of heterotopic pregnancy and aims to contribute to the understanding of this critical condition, emphasizing the importance of vigilance and early detection in potentially life-threatening scenarios ( Chan, A.J *et al*, 2016; Michał, M.,*et al* ., 2011).

**Clinical case profile**

Mrs PUA, a 29-year-old woman, G4P2+1 (1 alive), presented to the emergency unit with complaints of vaginal bleeding, passage of clots, and generalized abdominal pain at 5 weeks of menstrual age. The index pregnancy was spontaneously conceived, following two previous pregnancies delivered via cesarean section. Her third pregnancy was identified as an ectopic gestation.

Upon physical examination, the patient was alert, not pale, well-hydrated, pulse rate of 82 per minute and her blood pressure was recorded at 100/60 mmHg. An abdominal assessment revealed generalized tenderness with guarding and rigidity. She was immediately admitted and initially managed for threatened abortion, which included strict bed rest and treatment with Duphaston, antibiotics, folic acid, ferrous sulfate (Fersolate) and analgesics. An obstetric ultrasound was performed, confirming a viable first-trimester pregnancy with features suggestive of threatened abortion at 8 weeks of gestation, as well as a co-existing cornual ectopic gestation. A pelvic Doppler ultrasound further confirmed this diagnosis completed one week later, revealing a heterotopic pregnancy consisting of a viable embryo at 9 weeks of gestation alongside an ectopic left adnexal anembryonic gestational sac.

The patient was managed conservatively with weekly antenatal visits, which included thorough history-taking, examinations, serial packed cell volume checks, urinalysis and ultrasonography; see figures 1 and 2 below. A follow-up obstetric ultrasound at 14 weeks of gestation indicated a viable second-trimester pregnancy and suggested the possible resolution of the ectopic component compared to the previous scans. The pregnancy progressed uneventfully to 37 weeks, at which point she underwent an elective cesarean section and delivered a live female neonate with good APGAR scores of 8/10 at 1 minute and 10/10 at 5 minutes of birth with the baby weighing 2.2 kg. Postoperative recovery was satisfactory, and the patient was discharged after five days with routine medications.

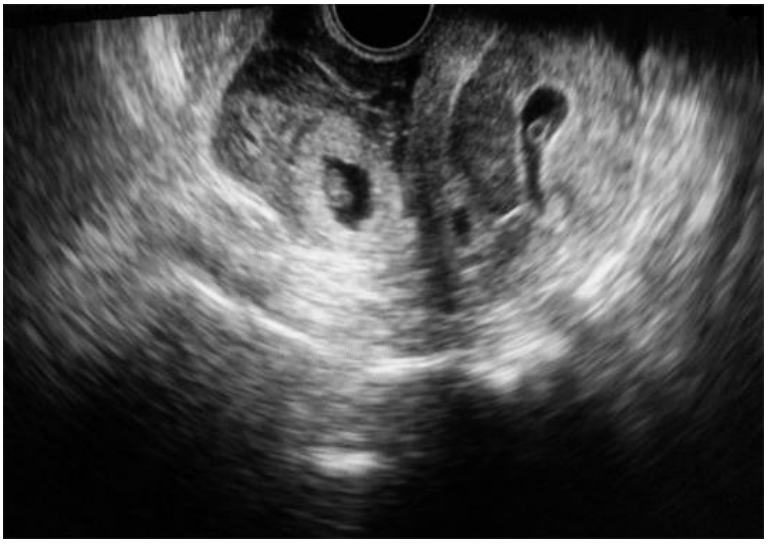

Figure 1: Ultrasound showing intrauterine and ectopic gestation at 8 weeks of pregnancy

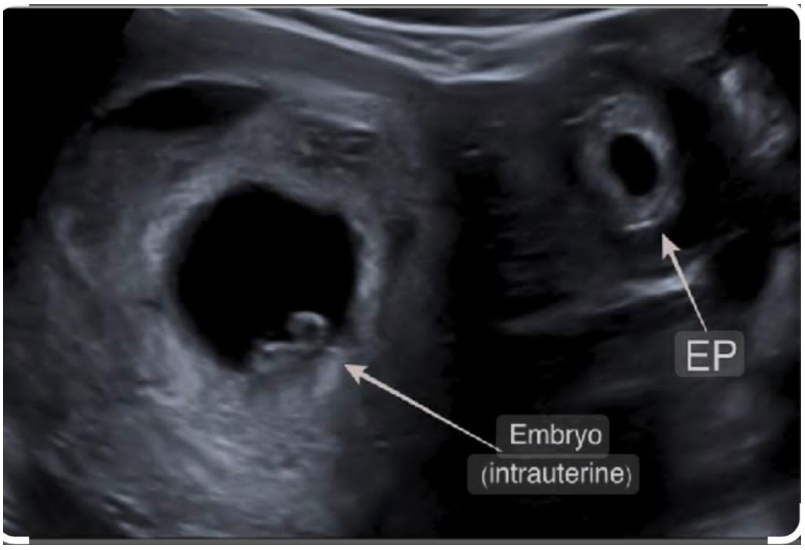


Figure 2: Follow-up ultrasound confirming heterotopic pregnancy at 9 weeks of pregnancy.

**Discussion**

Heterotopic pregnancy involves multiple gestations, with one in the uterine cavity and another outside, typically in the fallopian tubes, cervix, or ovaries. This condition can present as an emergency but in a spontaneous conception, the diagnosis is difficult to make, however an important one to consider in the presence of acute abdominal pain, hemorrhagic shock, and intrauterine pregnancy.

Additionally, conservative management may be feasible for select patients like in this case documented, (Anozie *et al.,* 2019).

Historically, heterotopic pregnancy was first documented in 1708 as an autopsy finding,(Kumar, R., & Dey, M. 2015). Recent studies are now stressing the clinical significance of this condition. Even though there is no single investigation that can predict the presence of an HP, it should be suspected in any patient with the Reece *et al* criteria defined by abdominal pain, adnexal mass, peritoneal irritation and an enlarged uterus as signs and symptoms suspicious of HP. Since most HP is still thought to be extremely rare many ultrasonography specialists fail to search for coexistent ectopic pregnancy when evaluating intrauterine gestation (Michał, M.,*et al* 2011; Kumar, R., & Dey, M. 2015).

The estimated incidence in the general population is estimated at 1:30,000 for a naturally conceived pregnancy as demonstrated in this report. The incidence among patients with assisted reproduction is higher and is thought to be around 1-3:100. Due to this, the overall incidence is now on the increase, (Weerakkody *et al.,* 2024). Heterotopic pregnancies have been diagnosed from 5-34 weeks of gestation with up to 70% diagnosed between 5-8 weeks of gestation, 20% between 9-10 weeks, and only 10% after the 11th week. A study by Chan et al. involving 47 cases found that 30% of women experienced preterm delivery, while 70% delivered at term. Additionally, around 30% of pregnancies ended in miscarriage, and 10% opted to terminate their intrauterine pregnancies. The established risk factors predisposing to simultaneous dual sited pregnancies like that of Mrs. PUA includes, history of a previous ectopic pregnancy, prior tubal surgery, and others like use of an intrauterine contraceptive device, history of pelvic inflammatory disease and assisted reproductive techniques: multiple embryo transfer and ovulation induction.

In patients with a stable hemodynamic state and who are asymptomatic, expectant management may be a viable option for the management of heterotopic pregnancy. The primary advantage of this approach is that it minimizes the risks associated with surgical intervention. However, expectant management is contraindicated in cases of viable ectopic pregnancy or patients exhibiting clinical instability. It is important to recognize that the risk of rupture of the ectopic pregnancy remains a concern during expectant management. Therefore, regular ultrasonographic evaluations and close monitoring in a hospital setting are crucial for patients who choose this management strategy as applied in the case of Mrs PUA. Should any symptoms or signs suggestive of ectopic rupture or enlargement of the ectopic pregnancy arise, prompt emergency surgical intervention is warranted to ensure optimal maternal outcomes, (Anozie, O.B. *et al* 2019).

## Conclusion

This case illustrates that heterotopic pregnancy can resolve spontaneously in a few populations. However, a high index of suspicion is crucial in women presenting with abdominal pain during early pregnancy. Clinicians should be vigilant in monitoring such cases to ensure timely intervention when necessary, balancing conservative management with the potential need for surgical treatment.

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