

Spontaneous Twin Cornual Ectopic Pregnancy at 13 Weeks' Gestation: A Case Report from the Department of Obstetrics and Gynecology, Teaching Hospital of Angre, and Literature Review

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How to cite this paper: Akobe, Y.P., Kouakou-Kouraogo, R., Loba, O.P.J., Soro, N.A., Houphouët-Mwandji, N.B.C., Gadj, C.M., Soumahoro, S. and Adjoby, R. (2026) Spontaneous Twin Cornual Ectopic Pregnancy at 13 Weeks' Gestation: A Case Report from the Department of Obstetrics and Gynecology, Teaching Hospital of Angre, and Literature Review. *Open Journal of Obstetrics and Gynecology*, 16, 985-991. <https://doi.org/10.4236/ojog.2026.167091>

Received: June 2, 2026

Accepted: July 5, 2026

Published: July 8, 2026

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Abstract

Spontaneous twin ectopic pregnancy remains an exceptionally clinical entity. Its diagnosis is frequently an incidental finding at laparotomy. We report the case of a 25-year-old gravida 3, para 1 woman with a history of prior cesarean delivery, who presented with a 48-hour history of pelvic pain accompanied by abnormal uterine bleeding at approximately 13 weeks' gestation, without fever or rupture of membranes. Clinical evaluation and imaging studies raised suspicion of a left twin ectopic pregnancy at 13 weeks' gestation with moderate hemoperitoneum. Emergency laparotomy confirmed a ruptured left cornual ectopic pregnancy. A left salpingectomy with cornual wedge resection was performed. This case report underscores the critical role of first-trimester transvaginal ultrasound in the early detection and management of ectopic pregnancies.

Keywords

Twin Ectopic Pregnancy, Pelvic Pain, Hemoperitoneum, Cornual Pregnancy, Transvaginal Ultrasound

1. Introduction

Ectopic pregnancy (EP) is defined as the implantation and development of a fer-

tilized ovum outside the uterine cavity and accounts for 1% to 3% of all pregnancies [1]. When ruptured and hemorrhagic, EP remains a potentially life-threatening condition, particularly if diagnosis is delayed. Its clinical management poses significant diagnostic and therapeutic challenges due to its unpredictable temporal evolution.

Twin ectopic pregnancy represents an exceptionally clinical entity. Limited data are available in the literature, with an estimated incidence of 1 per 20,000 pregnancies [2], or approximately 1 per 200 ectopic pregnancies [3]. The occurrence of a viable twin ectopic pregnancy is even rarer, with a reported incidence of approximately 1 per 125,000 pregnancies [4] [5]. Management follows principles similar to those for singleton ectopic pregnancies, with a progressively expanding therapeutic armamentarium ranging from expectant management and medical therapy to radical surgical intervention.

We present herein an exceptional case of a spontaneous, evolving twin ectopic pregnancy managed at the Teaching Hospital of Angre, Abidjan, Côte d'Ivoire.

2. Case Presentation

A 25-year-old woman, gravida 3, para 1, with a history of one elective termination of pregnancy and one cesarean delivery performed three years prior for perinatal asphyxia, presented to our department with a 48-hour history of intense pelvic pain, profound fatigue, and moderate abnormal uterine bleeding. She reported a positive urinary pregnancy test two months earlier and without fever or rupture of membranes. The patient did not know the date of her last menstrual period.

On admission, physical examination revealed a patient in fair general condition with mucocutaneous pallor, blood pressure = 9/6 cm/Hg and rapid pulse. Abdominopelvic examination demonstrated tenderness with a positive umbilical pain sign, suggestive of peritoneal irritation. Speculum examination showed a closed cervical os with minimal dark-colored vaginal bleeding; bimanual examination elicited tenderness in the pouch of Douglas.

Emergency pelvic transabdominal ultrasonography revealed a uterus of increased size with regular contours, homogeneous myometrium, and an empty uterine cavity containing a decidualized endometrium. In the left adnexal region, two distinct gestational sacs were identified, each containing a visible embryo with biometric measurements consistent with 13 weeks' gestation (**Figure 1**). These findings were diagnostic of a viable left-sided twin ectopic pregnancy associated with moderate hemoperitoneum estimated at 800 to 1000 cc. The heartbeats of the embryos fluctuated between 142 and 150 beats/mn.

Complete blood count revealed significant anemia, with a hemoglobin level of 5.4 g/dL.

An emergency laparotomy was performed. Surgical exploration revealed a ruptured left cornual ectopic pregnancy with two gestational sacs, each containing a embryo (see **Figure 2**). The right fallopian tube was intact. A left salpingectomy with wedge resection was performed (see **Figure 3**). The surgical specimen was sent for histopathological examination.

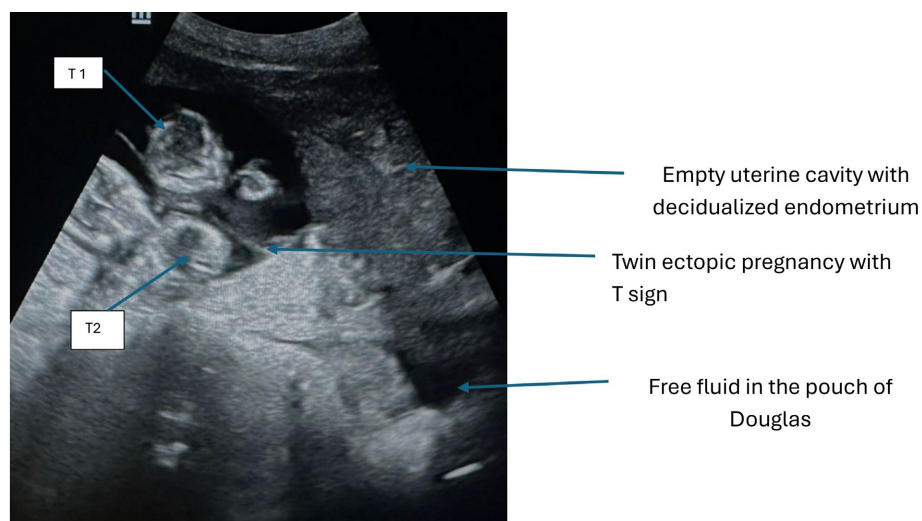


Figure 1. Viable twin ectopic pregnancy with hemoperitoneum.



Figure 2. Intraoperative view of the rupture of the left uterine horn and the gestational sac with the expulsion of the two embryos.

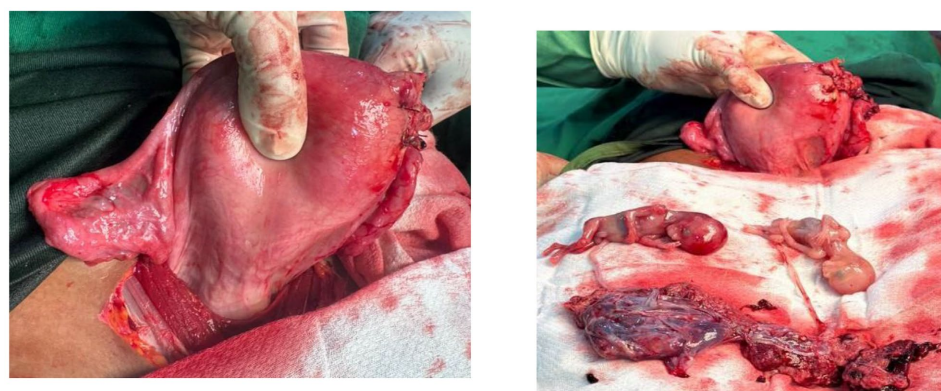


Figure 3. Intraoperative view after wedge resection and hysterorrhaphy, showing a mono-chorionic placenta.

The postoperative course was favorable following compensatory blood transfusion, and the patient was discharged after 6 days of postoperative care and moni-

toring. A total of 3 units of 450 cc of packed red blood cells were required. Villi were clearly visible in the resected fallopian tube. The diagnosis of ectopic pregnancy was confirmed. Monochorionic placentation was also confirmed by the absence of chorionic tissue (chorionic villi) between the two amniotic layers the anatomopathological examination. The serum hCG level then dropped sharply.

3. Discussion

A viable twin ectopic pregnancy is a rare clinical entity [4] [5]. Gualandi *et al.* [6] reported the first case of a unilateral tubal pregnancy with fetal cardiac activity in 1994. In a meta-analysis spanning 1945 to 2025, Sidhar [7] identified 17 documented cases in women aged 24 to 44 years. These patients typically presented with abdominal pain, vaginal bleeding, and amenorrhea between 6 and 12 weeks of gestation, with confirmed embryonic cardiac activity.

To our knowledge, this is the first case of a cornual twin ectopic pregnancy with fetal cardiac activity reported from our department. The pathophysiological mechanism underlying twin ectopic pregnancies, similar to singleton cases, is likely related to retrograde migration or impaired tubal transport of the fertilized ovum [8] [9]. In assisted reproductive technology (ART), the transfer of multiple embryos is a recognized risk factor [10] [11]. ART was not involved in our case; rather, this represents a spontaneous twin pregnancy in a patient with a history of cesarean delivery.

Ultimately, the risk factors for twin ectopic pregnancy mirror those of other ectopic pregnancies. Common predisposing factors include, pelvic inflammatory disease, prior ectopic pregnancy, ovulation induction, in vitro fertilization, and tubal surgery [12]. Additionally, some cases have been reported following contralateral tubal surgery, as previously described by Atef [2].

According to Timor-Tritsch, interstitial pregnancies rupture relatively early in pregnancy; moreover, ultrasound can be difficult to diagnose in the cornual location. Timor-Tritsch considers the following to be the criteria for this diagnosis: an empty uterine cavity, an eccentric gestational sac located more than 1 cm from the lateral wall of the uterine cavity, and a thin layer of myometrium surrounding the sac. [13]

The clinical presentation closely resembles that of other ectopic pregnancies. The classic triad of abdominal pain, secondary amenorrhea, and abnormal uterine bleeding in a woman of reproductive age, as observed in our patient, has been consistently described in the literature [14]. However, physical examination alone lacks sufficient diagnostic reliability and may lead to diagnostic delays that compromise timely management [15]. Clinical findings may range from signs of anemia to peritoneal irritation, indicating the development of hemoperitoneum [16]. The combination of the classic triad, a serum β -hCG level exceeding 1500 IU/L, absence of an intrauterine gestational sac, and identification of an adnexal mass separate from the ovary strongly suggests the diagnosis of ectopic pregnancy [2] [17]. Notably, β -hCG levels in twin ectopic pregnancies are often disproportion-

ately elevated compared to singleton cases. Ultrasonography may reveal two extrauterine gestational sacs or even distinct embryos. In Sidhar's review [7], one case required advanced imaging, specifically magnetic resonance imaging (MRI), to delineate pelvic anatomy and assess the risk of tubal rupture.

According to Ghanbarzadeh *et al.*, the clinical course is typically rapid due to tubal overdistension, which predisposes to early rupture and potentially life-threatening hemorrhage [18]. This contrasts with our case, in which the twin ectopic pregnancy progressed to 13 weeks' gestation before rupturing.

Management is guided by multiple clinical and laboratory parameters, commonly assessed using the Fernández clinical and biological prognostic score [19]. Medical management is generally contraindicated in viable twin ectopic pregnancies due to the high risk of rupture. Given the substantial risk of early rupture and hemoperitoneum, surgical intervention remains the most appropriate approach. Laparoscopy is considered the gold standard; although conservative surgery is preferred when feasible, radical surgery becomes unavoidable in cases of tubal rupture or uncontrolled hemorrhage [20]. Laparoscopic management typically involves salpingectomy, with early discharge (often next-day) being achievable, as demonstrated by Martin *et al.* [21].

In our low-resource setting, limited access to laparoscopic equipment and expertise necessitates primary laparotomy. In this case, we performed a left salpingectomy with cornual wedge resection due to extensive tubal destruction that precluded conservative management [17].

Our patient's obstetric future now depends on repeated cesarean sections performed before term due to the risk of uterine rupture.

4. Conclusion

Twin ectopic pregnancy remains an exceptionally clinical entity among ectopic pregnancies, distinguished by its potential severity and an elevated risk of rupture that can be life-threatening to the mother. This observation is characterized by the advanced age of the twin pregnancy in this ectopic pregnancy and the viability of the embryos at the time of diagnosis by ultrasound. Reducing maternal mortality associated with ectopic pregnancy requires a focus on primary prevention and the routine implementation of early transvaginal ultrasound upon pregnancy confirmation.

Conflicts of Interest

The authors attest to having obtained written consent from the patient and her representatives for the dissemination of clinical data, while guaranteeing anonymity and institutional approval. The authors also declare that they have no conflicts of interest.

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