

Unilateral Twin Tubal Ectopic Pregnancy: A Rare Case Report and Literature Review

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Abstract

Case Report

Background: Unilateral twin tubal ectopic pregnancy is an extremely rare form of ectopic pregnancy with an estimated incidence of 1 in 125,000 spontaneous pregnancies. **Case presentation:** A 31-year-old woman (G2P1) with secondary infertility of three years presented with right-sided pelvic pain and six weeks of amenorrhoea following simple ovarian stimulation. Pelvic ultrasound revealed an empty uterine cavity and a right adnexal mass containing two distinct gestational sacs (Figure 1 and Figure 2). Serum β -hCG was 9,200 mIU/mL. Laparotomy confirmed a right unilateral twin tubal ectopic pregnancy (Figure 3), and a right salpingectomy was performed. Histopathology confirmed two separate gestational sacs with chorionic villi. Postoperative recovery was uneventful, and the patient subsequently achieved a full-term intrauterine pregnancy. **Conclusion:** Unilateral twin tubal ectopic pregnancy remains a diagnostic and therapeutic challenge. Early ultrasound suspicion, prompt surgical intervention, and preservation of contralateral tubal function are critical for future fertility.

Keywords Ectopic pregnancy; Twin ectopic pregnancy; Unilateral tubal pregnancy; Salpingectomy; Ovarian stimulation; Case report.

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INTRODUCTION

Ectopic pregnancy occurs in approximately 1–2% of all pregnancies, with 95–98% implanting in the fallopian tube [1,2]. Twin ectopic pregnancy is exceptionally rare. Unilateral twin tubal ectopic pregnancy, where both embryos implant in the same tube, is even rarer, with fewer than 100 cases reported worldwide [3-4]. Its incidence is estimated at 1 in 125,000 spontaneous pregnancies and may increase after assisted reproductive technologies. We report a case of unilateral twin tubal ectopic pregnancy diagnosed by ultrasound, confirmed intraoperatively and histologically after ovarian stimulation, and successfully treated by salpingectomy, followed by a subsequent normal intrauterine pregnancy.

CASE REPORT

A 31-year-old woman, gravida 2 para 1, with a previous caesarean section and secondary infertility of three years, was admitted for acute right iliac fossa pain associated with six weeks of amenorrhoea. She had undergone simple ovarian stimulation with clomiphene citrate in the current cycle. She had no history of pelvic

inflammatory disease, endometriosis, or previous tubal surgery.

Physical examination revealed tenderness in the right iliac fossa without peritonism. Vital signs were stable.

Transvaginal pelvic ultrasound showed an empty uterine cavity with a thin endometrium. In the right adnexal region, a complex mass measuring 45 × 38 mm contained two distinct gestational sacs, each with a yolk sac but no embryonic pole or cardiac activity (Figure 1 and Figure 2). No free fluid was noted in the pouch of Douglas. Serum β -hCG level was 9,200 mIU/mL.

Because of technical difficulties with laparoscopy (previous caesarean section and suspected adhesions), an emergency laparotomy was performed. A ruptured right ampullary ectopic pregnancy containing two distinct gestational sacs was found. Right salpingectomy was performed. The left tube and both ovaries appeared normal.

Histopathological examination confirmed two separate gestational sacs within the tubal wall, each

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containing chorionic villi, confirming unilateral twin tubal pregnancy. Postoperative recovery was uncomplicated, and β -hCG declined appropriately. Two

years later, the patient achieved a spontaneous intrauterine pregnancy and delivered a healthy infant at term by caesarean section.

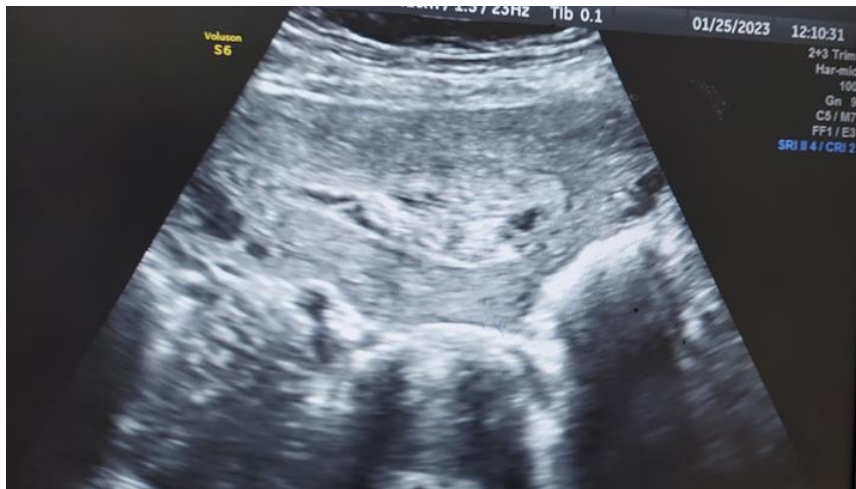


Figure 1: Transvaginal ultrasound (transverse view) demonstrating two separate yolk sacs within the same adnexal mass, confirming twin gestation outside the uterus

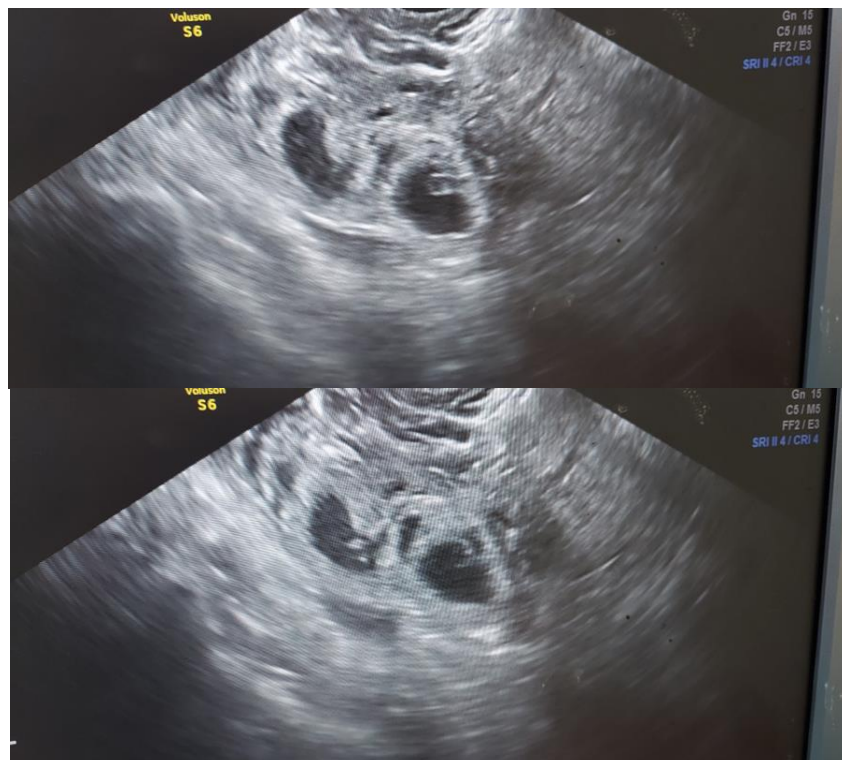


Figure 2: Transvaginal ultrasound (sagittal view) showing an empty uterine cavity and a right adnexal mass containing two distinct gestational sacs (arrows)

DISCUSSION

Unilateral twin tubal ectopic pregnancy is one of the rarest forms of ectopic gestation [3,5,8]. Its exact incidence is difficult to establish, but estimates range from 1 in 125,000 to 1 in 200,000 pregnancies in the general population [4,9]. The risk appears significantly higher after ovarian stimulation or in vitro fertilisation, with some series reporting rates up to 1 in 900 IVF pregnancies [6,10].

Two main pathophysiological mechanisms have been proposed: (i) multiple ovulations with simultaneous fertilisation and implantation of two distinct zygotes in the same tube [11], or (ii) early division of a single zygote before or during tubal implantation [12]. The present case occurred after clomiphene citrate stimulation, supporting the multiple ovulation hypothesis [7,13].

Preoperative diagnosis remains challenging. Although high-resolution transvaginal ultrasound can suggest the diagnosis by demonstrating two separate gestational sacs with yolk sacs or embryonic poles outside the uterus [14,15], confirmation is usually surgical and histological, as occurred in our patient [3,5,8].

Management is almost invariably surgical because of the high risk of rupture and life-threatening haemorrhage [4,9,16]. Salpingectomy, as performed in this case, is the most commonly reported procedure [3,5,8,11], although conservative salpingostomy has been described in haemodynamically stable patients wishing to preserve fertility [17]. Medical treatment with methotrexate is generally contraindicated due to the large volume and high β -hCG levels typically associated with twin ectopics [18].

Fertility prognosis depends primarily on the condition of the contralateral tube [19]. Successful subsequent intrauterine pregnancy, as seen in our patient, has been reported in 60–80% of cases with a normal remaining tube [9,16].

CONCLUSION

Unilateral twin tubal ectopic pregnancy is an extremely rare but potentially life-threatening condition. Heightened clinical and sonographic suspicion is required, especially in patients undergoing ovarian stimulation. Prompt surgical intervention, usually by salpingectomy, remains the cornerstone of management. Preservation or normality of the contralateral tube offers a favourable prognosis for future fertility.

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