



## Unilateral Tubal Twin Ectopic Gestation in a Patient with Anomalous Uterus - a Case Report

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### Abstract

*Twin ectopic pregnancy is a rare entity. Ultrasonography is a potential investigation to diagnose this entity and in emergency settings like ruptured ectopic pregnancy, it is the first investigation owing to its easy availability, less time consuming and cost effectiveness. Few studies have demonstrated association of ectopic pregnancy with congenital uterine anomaly as in this case.*

**Keywords:** *Ultrasonography, Ectopic pregnancy, Septate uterus, Twin pregnancy.*

### Introduction

Twin ectopic pregnancy is rare, with about a hundred cases described worldwide<sup>1</sup> and an estimated incidence of 1 in 200 of all ectopic pregnancies<sup>2</sup>. The incidence of ectopic pregnancy has increased from 0.37% of pregnancies in 1948 to approximately 2% of all pregnancies in 1992<sup>4</sup>. Although mortality decreased by nearly 90% from 1979 to 1992, ectopic pregnancy remains the leading cause of death during the first trimester of pregnancy, with a 9%-14% mortality rate.

The first unilateral tubal twin was reported by De Ott in 1891, and the first live twin tubal EP was reported in 1944.

Early diagnosis and treatment of women with tubal twin EP is very important and may decrease the risk of tubal rupture. This case report is aimed at highlighting the role of ultrasound as primary

imaging modality in the diagnosis of ruptured twin ectopic gestation and the rarity of this entity.

### Case Report

A 20 year old female (gravida 2, para 1) presented at the emergency with 3 week 2 days history of amenorrhoea, lower abdominal pain and vaginal bleeding for 2 days. On examination patient was haemodynamically stable with generalized tenderness over her lower abdomen. Urinary pregnancy test was positive. On vaginal examination, the cervix was closed with cervical excitation tenderness. The pulse rate was 100 beats/ min, haemoglobin was 11 gm/dl.

Transabdominal ultrasonography revealed two separate and empty endometrial canal complexes within the uterus, diagnosed as septate uterus, as shown in figure 1. There was a heterogeneously

echoic mass in right adenexa showing two internal gestational sac like structures with moderate haemoperitoneum as shown in figure 2, 3 & 4, diagnosed as ruptured tubal ectopic twin pregnancy. Both gestational sacs revealed only yolk sac without definite fetal pole. The gestational sac diameters were 11.5 mm (4 weeks 2 days) and 12.5 mm (4 weeks 3 day) respectively. (Fig. 2, 3).



**Figure 1:** Transabdominal ultrasound image demonstrating two separate endometrial canal complexes



**Figure 2:** Transabdominal ultrasound image demonstrating an echogenic mass in right adenexa.



**Figure 3:** Transabdominal ultrasound image demonstrating two gestation sacs



**Figure 4:** Transabdominal ultrasound image demonstrating hemoperitoneum in hepatorenal pouch



**Figure 5:** Salpingectomy specimen showing two gestation sacs (blue arrows) and adjacent dark red hematoma

During laparotomy 500ml haemoperitoneum detected. A ruptured right tubal twin ectopic pregnancy in the ampulla was also seen, as shown in figure 5. A right salpingectomy was done and no post-operative complications occurred.

### Discussion

Any pregnancy outside the uterine cavity, in which implantation occurs in any tissue other than the endometrium refers to an ectopic pregnancy. The most common site for occurring EP (97% of cases) is the fallopian tubes including ampulla (55%), isthmus (25%), and fimbria (17%) and in 3% of patients EP occurs in the abdominal cavity, ovary, or cervix<sup>3</sup>. Cornual pregnancies are rare and incidence of cornual pregnancy is less than 1% of all ectopic pregnancies. Cornual pregnancy specifically refers to the implantation of a blastocyst within the cornua of a bicornuate or septate uterus. Rupture of a cornual pregnancy also results in catastrophic haemorrhage. In our case patient was having septate uterus.

There are several risk factors for ectopic pregnancies. The main risk factors for ectopic pregnancy include past history of ectopic pregnancy, tubal surgery, and pelvic inflammatory disease.

Most patients who have an ectopic pregnancy present with a 5–9-week history of amenorrhea, mild pelvic pain, and vaginal spotting. Up to 50% of patients who have an ectopic pregnancy are asymptomatic. Therefore, some authors have advocated routine documentation of intrauterine pregnancies for all patients in their first trimester. The initial evaluation of patients suspected to have an ectopic pregnancy entails a quantitative measurement of serum human chorionic gonadotropin (HCG) with or without evaluation of progesterone levels, and transvaginal US.

Ultrasonographic findings of suspected adnexal mass and free liquid in the douglas pouch help the early diagnosis of EP and reduce the related mortality and morbidity. An adnexal mass that is separate from the ovary is the most common finding of a tubal pregnancy and is seen on ultrasonography in up to 89%-100% of patients. An adnexal mass is more specific for an ectopic pregnancy when it contains a yolk sac or a live embryo or when it moves independently from the ovary.

The tubal ring sign is the second most common sign of a tubal pregnancy, describes a hyperechoic ring surrounding an extrauterine gestational sac. A related finding is the “ring of fire” sign, recognized by peripheral hypervascularity of the hyperechoic ring.

In a cornual pregnancy, the gestational sac is surrounded by a thin rim of myometrium, in addition the sac is eccentric and more than 1 cm from lateral wall of endometrial cavity.

It is reported that the incidence of tubal rupture in was about 32% and the risk of rupture rises about 2.5% for every 24 h period when untreated. Until date, the surgical approach is the most reported option in literature to treat the unilateral tubal twin pregnancies.

## Conclusion

Twin ectopic pregnancy is a rare entity. Ultrasonography is a potential investigation to diagnose this entity and in emergency settings like ruptured ectopic pregnancy, it is the first investigation owing to its easy availability, less time consuming and cost effectiveness. Few studies have demonstrated association of ectopic pregnancy with congenital uterine anomaly as in this case. Our case is exceptionally unique as no predisposing condition for either ectopic or twin pregnancy was present.

## References

1. Hois EL, Hibbeln J, Sclamberg J. Spontaneous twin tubal ectopic gestation. *J Clin Ultrasound* 2006; 34:352-355.
2. Hanchate V, Garg A, Sheth R, Rao J, Jadhav PJ, Karayil D. Transvaginal-sonographic diagnosis of live monochorionic twin ectopic pregnancy. *J Clin Ultrasound* 2002; 30:52-56.
3. Lozeau AM, Potter B. Diagnosis and management of ectopic pregnancy. *AmFam Physician* 2005; 72: 1707–1714.
4. Centers for Disease Control and Prevention (CDC). Ectopic pregnancy: United States, 1990–1992. *MMWR Morb Mortal Wkly Rep* 1995; 44:46–48.
5. Dialani V, Levine D. Ectopic pregnancy: a review. *Ultrasound Q*2004;20:105–117. 21
6. Atri M, Leduc C, Gillett P, et al. Role of endovaginalsonography in the diagnosis and management of ectopic pregnancy. *Radiographics* 1996; 16:755– 774.
7. Shaw JL, Dey SK, Critchley HO, Horne AW. Current knowledge of the aetiology of human tubal ectopic pregnancy. *Hum Reprod Update*. 2010; 16:432–44.
8. Barnhart K, Mennuti MT, Benjamin I, Jacobson S, Goodman D, Coutifaris C. Prompt diagnosis of ectopic pregnancy in an emergency department setting. *Obstet Gynecol*. 1994; 84:1010–5.