J HK Coll Radiol. 2010;12:186-9

CASE REPORT

Unilateral Twin Ectopic Pregnancy

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ABSTRACT

Unilateral twin ectopic pregnancy is a rare condition and only about 100 cases have been reported in the literature. In this article, we present a case of twin ectopic pregnancy in the left fallopian tube. A 38-year-old woman who had in-vitro fertilisation came to our department for confirmation of pregnancy. She had high β–human chorionic gonadotropin levels. Transvaginal ultrasonography showed two gestational sacs: one containing a live embryo and the other without an embryo, both in the left adnexa. Twin ectopic pregnancy, even though rare, must be looked for on ultrasound scanning especially in patients having in-vitro fertilisation, because of the potential mortality and morbidity associated with this condition.

Key Words: *Chorionic gonadotropin; Fertilization in vitro; Pregnancy, tubal; Twins; Ultrasonography, prenatal*

中文摘要

單側雙胞異位妊娠

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單側雙胞異位妊娠很罕見，文獻中只記載約100個病例。本文報告一個有關左輸卵管雙胞妊娠的病例。一名38歲女子接受試管嬰兒胚胎植入而到本院確認是否懷孕。病人的人類絨毛膜性腺激素水平很高，經陰道超聲檢顯示她左面附件內有兩個妊娠囊，其中只有一個有存活胚胎。雙胞異位妊娠雖然很少見，但由於其潛在的罹病及死亡率，尤其是經試管內授精的婦女，醫生必須對懷疑個案進行超聲檢。

INTRODUCTION

Ectopic pregnancy can pose a diagnostic and therapeutic challenge as the presenting symptoms and signs vary widely between patients. It is a major health risk for women of child-bearing age, and if not treated properly, can lead to life-threatening complications. Several factors increase the risk of ectopic pregnancy; the most important of which is pelvic inflammatory disease, followed by operative trauma, congenital anomalies, tumours, assisted reproductive therapy and adhesions resulting in anatomically distorted fallopian tubes. Twin ectopic pregnancy is a rare condition with only about a hundred cases described worldwide.[1] Unilateral twin ectopic gestation is estimated to occur in approximately 1 in 200 ectopic gestations.[2]

CASE REPORT

A 38-year-old woman who had been married for more

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Submitted: 14 Oct 2009; Accepted: 12 Jan 2010.

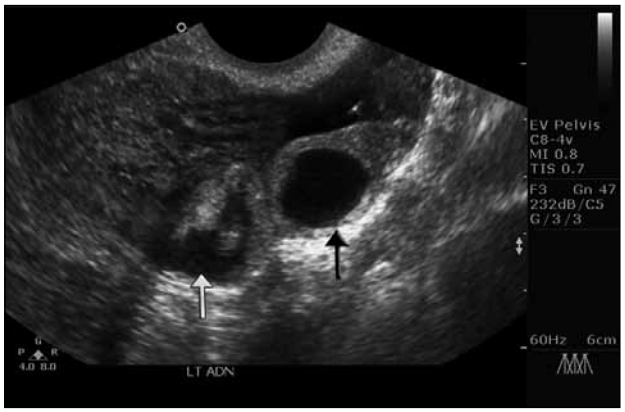

Figure 1. Transvaginal ultrasound scan showing two extra uterine gestational sacs (white and black arrows) in the left adnexa.

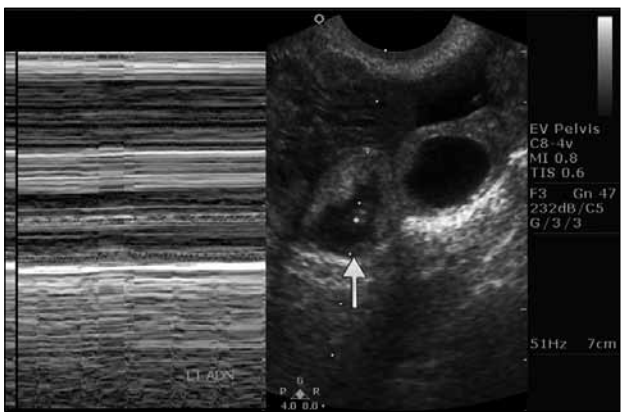

Figure 2. Transvaginal ultrasound scan showing gestational sac with live embryo (white arrow) and empty sac near it.

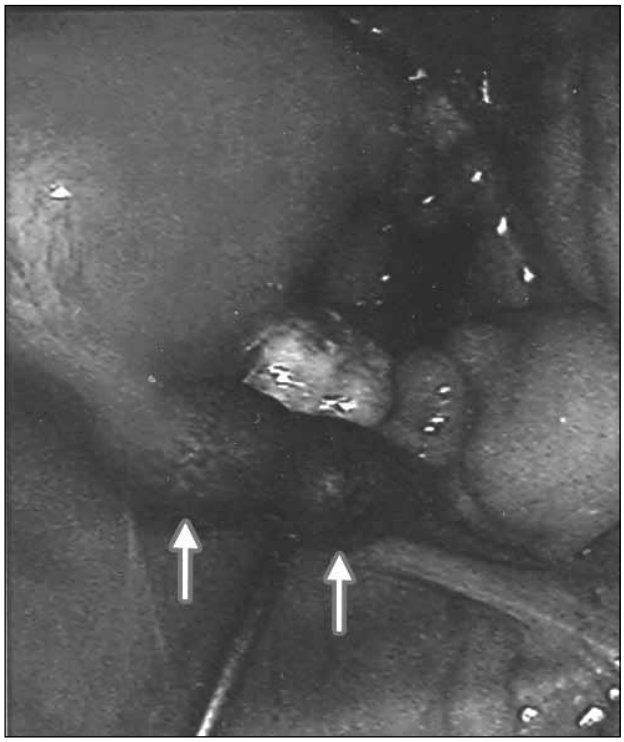

Figure 3. Double sac ectopic (white arrows) distending the left fallopian tube on laparoscopy.

than 10 years, underwent recent in-vitro fertilisation (IVF) and came to our department for a routine ultrasonographic assessment. She had no history of pain or vaginal bleeding, but was previously diagnosed to have extensive pelvic inflammatory disease on laparoscopy. Her last menstrual period was approximately 6 weeks prior to the ultrasonography.

The initial ultrasound revealed an enlarged left ovary with an empty endometrial cavity, and no other abnormality. The patient was managed conservatively as she was asymptomatic. However, due to rising β–human chorionic gonadotropin (β-hCG) levels, ultrasonography was repeated 5 days later. This revealed two extrauterine gestational sacs adjacent to each other (Figure 1). One of the sacs had an embryo with a beating heart (Figure 2) and a crown-rump length measuring 8 mm that corresponded to a gestational age of 6 weeks and 5 days. No embryo was detected in the second sac. The sacs measured 21 mm and 22 mm in diameter, respectively. The uterine cavity was empty. Minimal free fluid was seen in the Douglas cul-de-sac. Both ovaries showed evidence of hyperstimulation with numerous corpora lutea.

Laboratory studies revealed a β-hCG level of 36,796 IU/L at the time of the second ultrasonography. The patient underwent emergency laparoscopy, which revealed a double ectopic gestation distending almost the entire length of the left fallopian tube (Figure 3); the sacs measured 20 mm and 15 mm. No haemoperitoneum was seen in the pouch of Douglas. Left salpingectomy was performed. The patient did well postoperatively and was discharged after 3 days.

DISCUSSION

The incidence of ectopic pregnancies has been increasing steadily since the 1970s, and now accounts for up to 2% of all pregnancies.[3] Several factors are thought to increase the risk of ectopic pregnancy. Pelvic inflammatory disease confers the highest risk, but others include operative trauma, congenital anomalies, tumours, adhesions, and advanced maternal age.[4] Anything that interfere with the passage of the ovum through the tube increases the risk of implantation at an ectopic site.[5]

Most twin ectopic pregnancies are heterotopic, i.e., an

intrauterine pregnancy exists alongside an ectopic one. The incidence of such a pregnancy is estimated to be 1 in 7000.[6] Most unilateral twin tubal pregnancies are monozygotic and monochorionic.[7] The presence of 2 gestational sacs, as in our case, indicates a dichorionic pregnancy. Studies suggest a delay in ovum transport and consequently implantation, which increases the risk of monozygotic twinning.[8] Minor trauma to the blastocyst during procedures for assisted reproduction may also lead to an increased incidence of monozygotic twinning.[9] One reason for the low incidence of twin ectopic pregnancy is that malformations are common, thus leading to high foetal wastage in monozygotic twins.[10]

Unilateral twin ectopic pregnancy is a rare condition, first described in 1891 by De Ott.[11] It was only in 1994 that a live twin ectopic pregnancy was reported.[12] Live twin ectopic pregnancies are thought to occur at a frequency of 1 in 125,000.[13] Twin ectopic pregnancies have rarely been reported in the ovary,[14] broad ligament,[15] fallopian tube,[16,17] and in the cervico-isthmic region.[18]

More than a hundred twin ectopic pregnancies have been reported to date, and their incidence has been increasing steadily. There were less than 10 unilateral ectopic twin pregnancies reported with beating hearts in both embryos. In 1994, Gualandi et al[12] documented the first case of unilateral, tubal twin pregnancy with cardiac activity in both embryos, by endovaginal ultrasound. Fousseyni and Mamadou[19] in 2007 reported an unruptured dichorionic unilateral live twin ectopic pregnancy. In 2001, Göker et al[20] reported a case of unilateral ectopic twin pregnancy following an IVF cycle. Most patients present 4 to 6 weeks into the pregnancy. Sergel and Greenberg[21] reported a case with a gestational age of 11 weeks demonstrated by ultrasound. Many cases have been reported in patients with previous infections.[22,23] In 2002, Hanchate et al[24] reported another patient with a live twin ectopic pregnancy with no predisposing factors.

Although women with ectopic pregnancies tend to have lower β-hCG levels than those with normal intrauterine pregnancies, twin ectopic pregnancies predispose them to higher levels. In our case, the β-hCG level was high (at 36,796 IU/L) at the time of the second ultrasound.

Because of the superior resolution of uterine and adnexal structures, transvaginal ultrasonography is recommended for detailed evaluation of patients suspected of having ectopic pregnancies. Identification of an extrauterine gestational sac containing a yolk sac (with or without an embryo) confirms the diagnosis. Suggestive findings include solid adnexal or tubal mass (including the tubal-ring sign, representing a tubal gestational sac), and echogenic cul-de-sac fluid.

Treatment of an ectopic pregnancy depends on its clinical presentation, size, and complications, and may entail conservative, medical, or surgical intervention. Ectopic pregnancies can resolve spontaneously through regression or tubal abortion. Surgical management should be reserved for patients who refuse or have contraindications to medical treatment, those in whom medical treatment fails or they become haemodynamically unstable. Laparoscopic treatment of ectopic pregnancy is associated with lower cost, less operating time, shorter hospital stays, and faster recovery. Salpingostomy is preferred, particularly for women who wish to preserve their fertility.

In our case, the patient was asymptomatic and the affected fallopian tube was unruptured. Two ectopic gestational sacs were identified, only one of which showed a live conceptus, and both sacs were in close proximity to each other. The presence of multiple corpora lutea added to the challenge of finding the sacs. The trophoblastic rings are more echogenic than the walls of the corpora lutea. Cursory ultrasound evaluation could have easily missed the second gestational sac, for which reason a systematic evaluation of the adnexa is required. Twin ectopic pregnancy, even though rare, must be looked for on ultrasound scanning, especially in patients having IVF treatment, because of the potential mortality and morbidity associated with this condition.

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