

Unilateral twin tubal ectopic pregnancy in a patient following tubal surgery

Nahid Ghanbarzadeh, Mohammad Nadjafi-Semnani¹, Ali Nadjafi-Semnani², Fatemeh Nadjafai-Semnani², Sima Shahabinejad³

Departments of Gynecology and Obstetrics, ¹Urology and ³Private Practicing Radiologist, Birjand University of Medical Sciences, Birjand, ²Medical Student, Tehran University of Medical Sciences, Tehran, Iran

We report a spontaneous unilateral live tubal twin pregnancy in a patient with a history of previous ectopic pregnancy (EP) and tubal surgery. Transvaginal ultrasound showed one pregnancy sac containing two fetal poles with cardiac activity, which appeared to be sited within the right adnexum. The right tubal EP was removed by salpingectomy. Ultrasound findings of suspected adnexal mass and free liquid in the Douglas pouch along with an increased beta-human chorionic gonadotrophin levels, especially in association of risk factors, can help the early diagnosis of EP and reduce the related mortality and morbidity.

Key words: Ectopic pregnancy, salpingostomies, tubal pregnancy, twin pregnancy

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INTRODUCTION

Any pregnancy outside the uterine cavity which the implantation occurs in any tissue other than the endometrium refers to an ectopic pregnancy (EP). The most place 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.^[1] The tubal twin EP is a rare condition, and the first unilateral tubal twin was reported by De Ott in 1891, and the first live twin tubal EP was reported in 1944.^[2] A live tubal twin EP is a very rare condition and among >100 reports of tubal twin pregnancies, till now, only 8 cases were live.^[3] Early diagnosis and treatment of women with tubal twin EP is very important and may decrease the risk of tubal rupture. In our case, we present a spontaneous unilateral live tubal twin pregnancy in a patient with a history of previous EP and tubal surgery.

CASE REPORT

A 31-year-old woman, gravida 3 para 1, admitted to Vali-e-Asr Hospital in Birjand, Iran, in 2012. She presented with a 2-week history of abdominal pain and vaginal bleeding following 5-week' amenorrhea. She had previously undergone surgery including unilateral salpingoplasty 6 years ago following an EP and dilatation and curettage for an incomplete

abortion 5 years ago. She had a term vaginal delivery 4 years prior to admission. She had no contraceptive method for 2 years and had a family history of twins. She had been amenorrhoeic for 5-week with a previously regular menstrual cycle. A pregnancy test was performed, and beta-human chorionic gonadotrophin (β -hCG) level was 1750 mIU/ml. Examination revealed marked lower abdominal cramping pain, and vaginal spotting. The uterus was of normal size.

Transvaginal ultrasound scan showed no evidence of intrauterine pregnancy with an empty uterus filled with fluid. There was a 23-mm cyst on the left ovary. Free fluid was found in the pouch of Douglas. There was one pregnancy sac, which appeared to be sited within the right adnexum. The sac contained two fetal poles, each showing cardiac activity. The conjoined twins with crown-rump length, one with 16-mm (8-week gestation) and the other 17-mm (8-week gestation) was observed. These findings were compatible with monochorionic monoamniotic live twin EP in the right fallopian tube [Figure 1].

A laparotomy was performed via Pfannenstiel incision, and right tubal EP was removed by salpingectomy. The patient was discharged from hospital on postoperative day 2 and was followed-up until her β -hCG level fell below 5 mIU/ml. Histopathological examination confirmed the diagnosis.

Address for correspondence: Dr. Mohammad Nadjafi-Semnani, P.O.Box: 493, Birjand, Iran.
E-mail: nadjafi@hbi.ir

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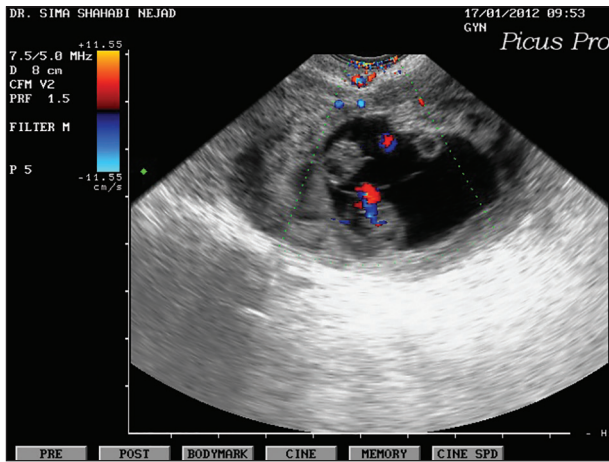


Figure 1: Ultrasound evaluation of the patient

DISCUSSION

It is found that the incidence of EPs has risen fourfold compared with the rates of 1970 in the United States (from 0.5% of all pregnancies in 1970 to 2% in 1992),^[4] however, unilateral tubal twin EPs are still rare and until now about 100 cases have been reported in the literature.^[5] Moreover, fetal cardiac activity has been reported in about <10 cases.^[3]

The twin pregnancy is more prevalent among patients with a family history of multiple pregnancies.^[6] A positive family history of twins was found in our patient. The incidence of EP is around 1-2% of all pregnancies^[7] and the incidence of spontaneous twin pregnancy is 1:90.^[8] However, live unilateral tubal twin EP is a very rare condition and occurs in about 1:125,000 of pregnancies.^[9] Similar to our case, most (95%) of the unilateral tubal twin EPs were monochorionic and monoamniotic.^[2] Several risk factors for tubal EP were identified including active and passive cigarette/tobacco smoking, tubal damage as a result of surgery or infection (particularly *Chlamydia trachomatis*), and *in vitro* fertilization.^[7] Our patient had a previous history of tubal surgery. Furthermore, some authors indicated that the number of prior deliveries, EPs, and spontaneous or induced abortions were strongly associated with occurrence of EP.^[10,11] All these risk factors were positive in our patient. It has been demonstrated that the history of EP leads to an increased recurrence rate of about 10% and 25% for one and two/more previous EP, respectively.^[12]

A history of pelvic pain along with amenorrhea and vaginal bleeding are found in 45% of EPs^[2] and probability of EP in a patient with only abdominal pain and vaginal bleeding is 39%. The likelihood of EP rises to 54% if the patient has other risk factors, including history of tubal surgery, previous EP, or pelvic inflammatory disease.^[1]

In addition, ultrasound evaluations have facilitated the early EP diagnosis which may lead to a reduction in maternal mortality and morbidity. Also, use of β -hCG assay, especially serial measurements, may improve these evaluations. Studies demonstrated that a β -hCG value of above 1500 mIU/ml corresponds to an approximately 91.5% detection of gestational sacs.^[13] However, ultrasonographic findings of suspected adnexal mass and free liquid in the Douglas pouch along with an increased β -hCG levels, especially in association of risk factors, can help the early diagnosis of EP and reduce the related mortality and morbidity.

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.^[14] Until date, the surgical approach is the most reported option in literature to treat the unilateral tubal twin pregnancies.^[15] There have been 4 cases of tubal twin pregnancies (3 unilateral, 1 bilateral) that methotrexate treatment has been tried.^[16-19] However, Arikan *et al.* suggested that the nonsurgical treatment may be favored in tubal twin EPs in case of stable maternal vital signs and negative fetal cardiac activities.^[19] The tubal twin EP is a major health risk for women of childbearing capacity which may lead to life-threatening complications if not treated properly. Therefore, twin EP must be considered base on physical examination and existence of risk factors and should be carefully looked for on ultrasound scanning, due to the potential mortality and morbidity associated with this condition.

AUTHOR'S CONTRIBUTION

NGh contributed in the conception of the work, conducting the study, revising the draft, approval of the final version of the manuscript, and agreed for all aspects of the work PM contributed in the conception of the work, drafting and revising the draft, approval of the final version of the manuscript, and agreed for all aspects of the work. MNS contributed in the conception and design of the work, drafting and revising the draft, approval of the final version of the manuscript, and agreed for all aspects of the work. ANS contributed in the conception of the work, conducting the study, revising the draft, approval of the final version of the manuscript, and agreed for all aspects of the work. FNS contributed in the conception of the work, revising the draft, approval of the final version of the manuscript, and agreed for all aspects of the work. SSh contributed in the conception of the work, revising the draft, approval of the final version of the manuscript, and agreed for all aspects of the work.

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