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Spontaneous Twin Ectopic Pregnancy with Live Embryos: A Case Report

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Authors' contributions

This work was carried out in collaboration by all authors. Authors TC and EU wrote the first drafts of the manuscript. Author MD managed the literature search. Author CNY revised and edited the manuscript. All authors read and approved the final manuscript.

Case Study

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ABSTRACT

Ectopic pregnancy is a challenging medical emergency that can be easily misdiagnosed. Early diagnosis is essential in ectopic pregnancy since it may be a life-threatening clinical entity if it is misdiagnosed and ruptures, resulting in intra-abdominal bleeding. Twin ectopic pregnancy is a rare clinical entity. We present a case of unilateral live spontaneous tubal twin ectopic pregnancy in a woman with a history of counter-lateral salpingectomy.

Keywords: Twin pregnancy; methotrexate; surgery.

1. INTRODUCTION

Ectopic pregnancy is an important cause of maternal morbidity and mortality, particularly in developing countries; it is a medical emergency since it can be difficult to diagnose and it might be fatal if it ruptures, causing heavy intra-abdominal bleeding. Ectopic pregnancy is the leading cause of maternal mortality in the first trimester. The rate ranges between 10% to 15% of all maternal deaths [1]. Unilateral twin ectopic pregnancy is an extremely rare condition; in a previous case report in literature, the frequency of live twin ectopic

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pregnancies was found to be 1/125,000 [2]. In the same case, the rate of unilateral twin ectopic gestations was reported to be approximately 1 in 200 ectopic gestations [2].

2. CASE

A 32-year-old multiparous woman presented to the emergency room of the Department of Obstetrics and Gynaecology with vaginal bleeding. She could not remember the exact date of the first day of her last menstrual period. She had irregular menstrual periods. She had had two full-term pregnancies resulting in two spontaneous vaginal deliveries and she had undergone abdominal surgery for ectopic pregnancy; however, she was unable to provide any details about this surgical intervention. She had been suffering from bronchial asthma for 3 years, but no medical treatment had been prescribed to her.

On general physical examination, the patient was afebrile and her vital signs were within the normal ranges. Her pelvic examination revealed blood in the vagina and a closed uterine cervix; mild uterine tenderness was the only important finding in her bimanual examination and there was no adnexal mass. Her ultrasound (US) examination demonstrated a heterogeneous endometrium with a thickness of 22mm; no suspicious site was observed for ectopic pregnancy in bilateral adnexal areas. Her human chorionic gonadotropin (hCG) level was 6000 IU/L. She was admitted to the Department of Gynaecology and a full endometrial curettage was performed since the pre-diagnosis was incomplete abortion. The endometrial specimen was collected and sent to the pathology laboratory for histopathological examination, resulting in a diagnosis of endometrial proliferation. The level of hCG increased after 16 hours. Since hCG and uterine tenderness increased, TV US examination was performed and a left tubal pregnancy was diagnosed and a single dose of methotrexate (MTX) was administered (1mg/kg). After the single-dose MTX treatment, her hCG level was 13,000IU/L on the third day. Another detailed US examination was performed and a left tubal twin pregnancy was diagnosed with positive cardiac activities (Fig. 1). Laparotomy was carried out and a tubal mass observed on the left side (Fig. 2); the left ovary was normal and the right tube and ovary were absent due to the operation performed for her previous ectopic pregnancy. Total salpingectomy was performed on the left side without any complication, since she wanted to have a permanent method of contraception (Fig. 3). Histopathological evaluation of the specimen identified a dichorionic diamnionic twin tubal pregnancy. There was no postoperative complication and the patient was discharged on the fourth postoperative day. Serum hCG was undetectable 4 weeks after surgery.

3. DISCUSSION

Unilateral twin tubal ectopic pregnancy is a rare clinical entity. The rate of unilateral twin tubal ectopic gestations was reported as approximately 1 in 200 ectopic gestations [2]. The incidence of ectopic pregnancy has progressively increased while morbidity and mortality have decreased because of developments in diagnostic and therapeutic modalities. It is also known that assisted reproductive technologies increase the ectopic pregnancy rates. In one study of ectopic pregnancy incidence in the general population was given 2% and it was mentioned that, if following assisted reproductive technologies existed then the rate was ranged between 2.1 and 11% [3]. Twin tubal monochorionic ectopic pregnancies probably arise due to the increasing use of assisted reproductive techniques [4].

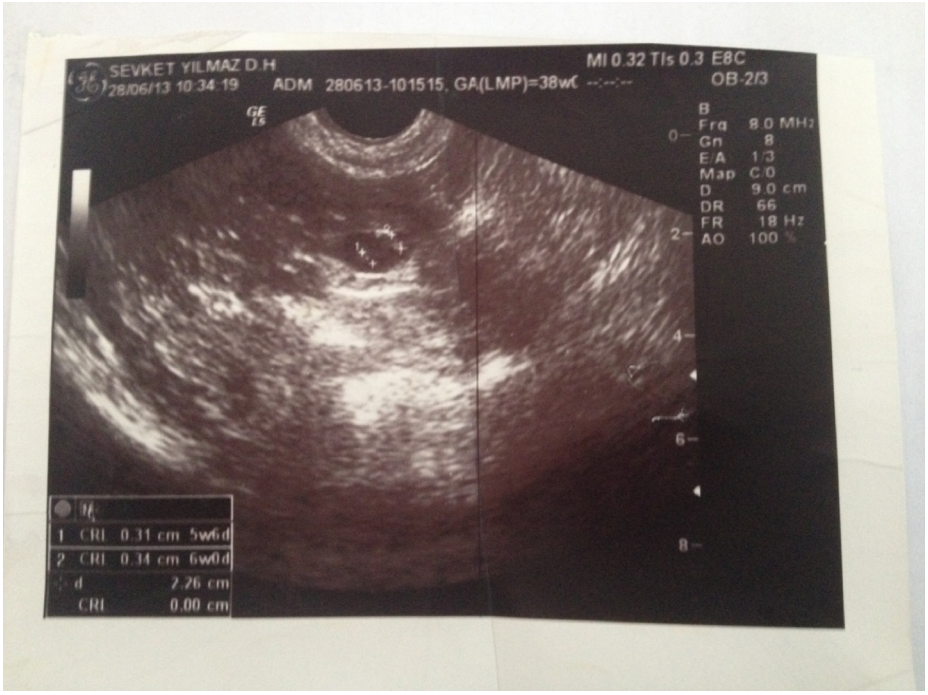

Fig. 1. Ultrasonographic illustration of twin tubal ectopic pregnancy

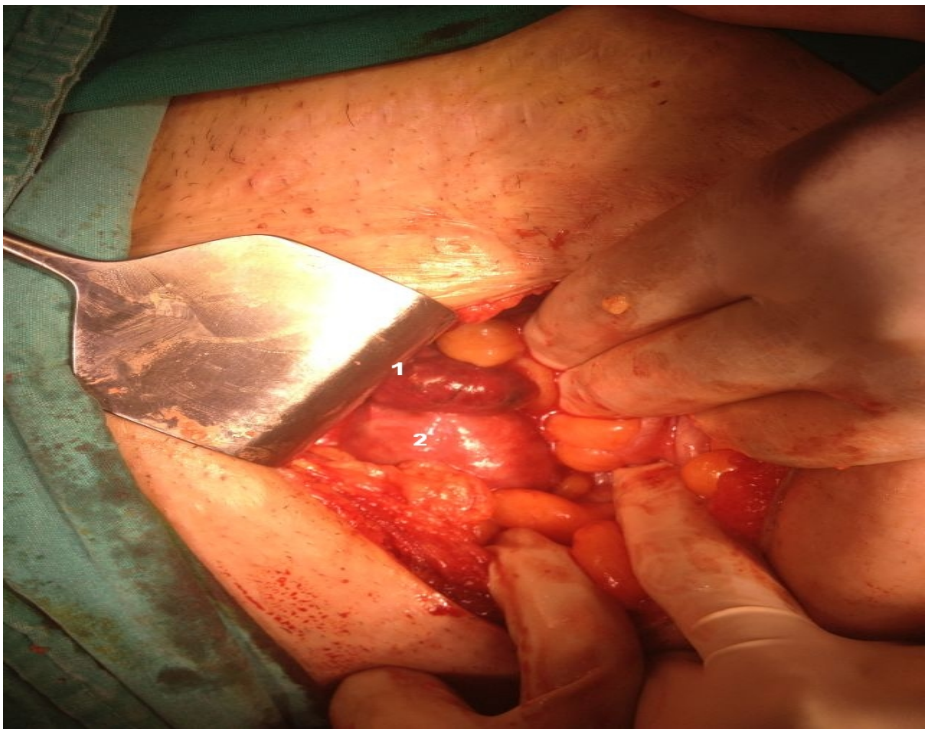

Fig. 2. Peroperative view of lesion (1) and uterus (2)

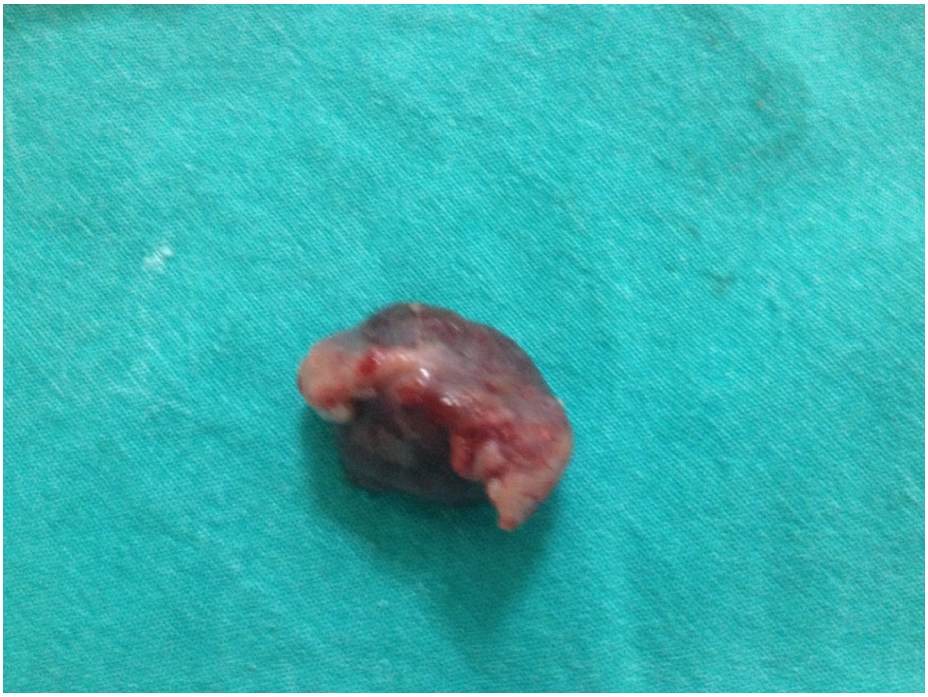

Fig. 3. View of the left salpingectomy material

Early diagnosis of ectopic pregnancy is possible by the use of sensitive assays for hCG levels and advanced ultrasound devices providing high definition images, which might result in medical treatment of most ectopic pregnancies. Moreover, early diagnosis of ectopic pregnancy might help the clinician to decide on the right medical or surgical methodology without delay, resulting in lower mortality and morbidity. Although early diagnosis of ectopic pregnancy is possible, in the case we present here, unilateral tubal twin pregnancy was not diagnosed in the ultrasound examination when the patient was admitted to hospital, probably due to the poor quality images.

Treatment consists of medical therapy (MTX) or surgical intervention (salpingectomy or salpingostomy) by laparotomy or laparoscopy [5,6]. Therapeutic transition from surgical interventions to medical management has been attributed to early diagnosis through the use of sensitive assays for hCG levels and the high definition images obtained in vaginal ultrasound examinations performed by advanced ultrasound machines; the success rate in MTX treatment was reported as 71-100% [7].

Despite of high success rate with MTX administration in the treatment of ectopic pregnancy is reported in different studies; such these cases might be under-diagnosed and mistreated by clinicians; moreover, since MTX treatment might fail to treat ectopic twin pregnancies, a surgical approach may be the most appropriate option in these cases [8].

4. CONCLUSION

Unilateral twin ectopic pregnancy is a rare clinical entity. It should be kept in mind that it could be easily misdiagnosed or MTX administration might fail in the treatment of twin ectopic pregnancy.

CONSENT

The authors declare that 'written informed consent' was obtained from the patient for publication of this case report with accompanying images.

ETHICAL APPROVAL

The authors hereby also declare that all examinations and interventions have been examined and approved by the appropriate ethics committee and have therefore been performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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