Case Report

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Ipsilateral Interstitial Ectopic Pregnancy in a Patient with Previous Total Salpingo-Oophorectomy: A Case Report

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ABSTRACT

Ectopic pregnancy (EP) is a life-threatening condition in pregnancy. EP after partial or total salpingectomy on the same side is rare; the mechanism of this condition is not clear. However, three hypotheses have been reported. We present a case of interstitial EP in a woman who underwent ipsilateral total salpingo-oophorectomy for endometriosis 3 years ago. The current issue highlights that total salpingectomy does not exclude ipsilateral interstitial EP. Therefore, clinicians should be aware of this diagnosis to prevent catastrophic consequences.

Introduction

Ectopic Pregnancy (EP) is a life-threatening condition in pregnancy. Most ectopic pregnancies occur in the ampullary region of the fallopian tubes (92%) and interstitial areas (2.5%) [1]. EP after partial or total salpingectomy on the same side is rare [2]; the mechanism of this condition is not clear [3]. We present a case of interstitial EP in a woman who underwent ipsilateral total salpingo-oophorectomy for endometriosis 3 years ago.

Case Presentation

A 30-year-old woman presented to our hospital with pelvic pain, vaginal bleeding, and vomiting for 4 days.

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The period of amenorrhea was 6 weeks from the first day of the last menstruation period. The patient's vital signs were stable. The patient had a history of total left salpingo-oophorectomy for endometriosis 3 years ago. Her serum human chorionic gonadotropin Beta (β-HCG) level was 62018 mIU/ml. Transvaginal ultrasound (TVUS) showed no intrauterine gestation and the presence of an echogenic lesion with a cystic area on the left side at the fundal region associated with surrounding color flow (Figure 1). Therefore, the possibility of left interstitial EP at the site of the previous salpingectomy was suggested. An open laparotomy revealed a ruptured left cornual EP measuring 2 cm associated with 50 cc blood. In our TVUS, there was no evidence of EP rupture and blood in the pelvic cavity; thus, an EP rupture could happen between TVUS and operation.

Discussion

EP is a significant cause of maternal morbidity and mortality in early pregnancy. EP has multiple risk factors, such as a previous EP, using IUD, pelvic inflammatory disease, infertility, and smoking [4]. One of the EP sites is the intrauterine portion of the fallopian tube, known as the interstitial EP.

Transvaginal ultrasonography is a valuable imaging modality in the evaluation of interstitial EP. Ultrasound imaging shows a sac in the high fundal eccentric location; its abnormal location should be suspected if there is no adequate myometrial thickness (at least 5 mm) around the sac in all planes [5]. Several ultra-sonographic signs for the diagnosis of interstitial EP were proposed, including an empty uterine cavity, a sac located at least 1 cm away from the uterine cavity, and a sac surrounded by thin (less than 5 mm) myometrium [6]. In addition, the interstitial EP does not have a double decidual sign. The presence of an interstitial line sign is another helpful sonographic sign [7] that is an echogenic line extending from the endometrium to the gestational sac. In the differential diagnosis for interstitial EP, several entities include a septate or bicornuate uterus, myometrial contraction, or fibroid [5].

The diagnosis of interstitial EP is difficult [8], and it could result in a delay in correct diagnosis. Furthermore, the myometrial site of interstitial EP is more distensible to the gestational sac than other parts of the fallopian tube; it allows the gestational sac to develop more than other ectopic gestational sacs [9], causing more de-velopment and a delay in the presentation or complica-tion. Additionally, this anatomic location has high vascu-larity [9]. These features cause interstitial EP to have a higher risk of bleeding and mortality than other (ectopic pregnancies [EPs]) [8, 9].

One of the surgical management of EP is partial or total salpingectomy; additionally, there are several indications

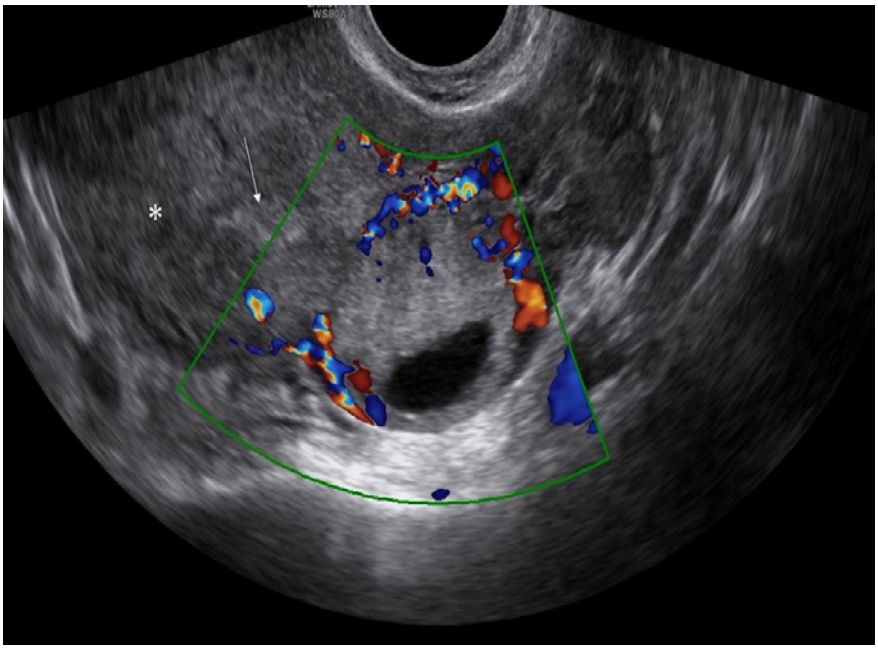

Figure 1. TVUS shows an echogenic lesion with a cystic area on the left side associated with surrounding color flow suggesting left interstitial EP Note the uterus(asterisk) and endometrium (arrow).

for the salpingectomy other than EP. EP following a salpingectomy on the same side is rare; indeed, this occurrence is not impossible. The precise mechanism of this condition is unknown. However, three hypotheses have been reported [10, 11]. The first suggests that fertilized ovum in a normal fallopian tube passes into the remnant of the resected tube through the endometrial cavity. The second states that spermatozoa travel through the normal tube and cul-de-sac for fertilizing the ovum on the operated side. The last one explains that because of recanalization or fistula at the site of surgery in the remnant tube, the ovum passes into the tubal remnant where fertilization and implantation happen.

Our case had ipsilateral cornual EP and history of the previous total salpingo-oophorectomy for endometriosis. Thus, salpingectomy does not necessarily eliminate the same side interstitial EP risk.

Conclusion

The current case highlights that total salpingectomy does not exclude ipsilateral interstitial EP and associated risk of morbidity and mortality. Hence, clinicians should be aware of this diagnosis to prevent catastrophic consequences.

Ethical Considerations

Compliance with ethical guidelines

All ethical principles are considered in this article. The participants were informed of the purpose of the research and its implementation stages. They were also assured about the confidentiality of their information and were free to leave the study whenever they wished, and if desired, the research results would be available to them. principles of the Helsinki Convention was also observed.

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Conflict of interest

The authors declared no conflict of interest.

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