Spontaneous ovarian and intrauterine non-viable heterotopic pregnancy at 12 weeks of gestation: A case report

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ABSTRACT

Introduction: Spontaneous heterotopic pregnancy is a clinical condition in which both intrauterine and extrauterine pregnancies occur simultaneously. An ectopic pregnancy in the ovary is extremely rare in the absence of risk factors.

Case presentation: A 37-year-old woman presented at 12 weeks of gestation with complaints of abdominal pain and intermittent bleeding. A transvaginal and pelvic ultrasound revealed two gestations with no cardiac activity. An ovarian pregnancy was removed via laparoscopy, and an intrauterine pregnancy was removed via curettage. The patient was discharged the following day in good health.

Conclusion: The ovaries are rare sites for heterotopic pregnancy. Early pelvic ultrasound during the first trimester should be routine to obtain an accurate diagnosis and proper management of such cases.

1. Introduction

Heterotopic pregnancy (HP), or the implantation of pregnancies in more than one location, is a rare diagnosis with a high risk of morbidity and mortality if not treated promptly [1]. It is unusual to have both intrauterine and ectopic pregnancies at the same time. Ectopic pregnancies in the ovaries are uncommon [2]. In spontaneous pregnancies, the incidence of HP is about 1:30,000. The incidence is higher in pregnancies resulting from assisted reproduction techniques (ART), ranging from 1:100 to 1:3600 and reaching nearly 1% in some series [3]. The diagnosis and management of heterotopic cases are really challenging. Case series have revealed that most diagnoses are made following laparotomy [4,5]. The gold standard in the management of heterotopic pregnancies is surgery via laparoscopy or laparotomy [6,7].

2. Case Presentation

A 37-year-old woman, gravida 7, para 6, was referred to the emergency department, presenting at 12 weeks of gestation with pain in the lower abdomen and intermittent vaginal bleeding for 2 days. She had no risk factors. Her medical history was unremarkable, and she had no surgeries on tubes or ovaries, no use of a fertility drug or hormone, and no intrauterine contraceptive device. On admission, she was hemodynamically stable with normal consciousness. The pain was located in the lower abdomen. The pulse rate was 70/min, and blood pressure was 110/60 mmHg. Her laboratory tests were normal except the hemoglobin was 10 g/dl, and her temperature was normal. Transvaginal ultrasound showed intrauterine gestation and pelvic ultrasound revealed an ovarian mass. There was no heart beat in the ovarian and intrauterine pregnancy.

During surgery via laparoscopy, an unruptured ectopic pregnancy in the left ovary (Figs. 1 and 2) was found. Other structures were normal, with a small amount of fluid in the pelvic cavity. The gestation in the ovary was excised by laparoscopy without ovarian excision and the intrauterine gestation was removed by a curettage procedure. She was discharged from the hospital on postoperative day 1 in stable condition. The result of the pathology examination was a heterotopic pregnancy with ectopic implantation.

3. Discussion

Spontaneous heterotopic pregnancy is a rare clinical condition
An ovarian heterotopic pregnancy accounts for only 2.3% of all heterotopic pregnancies [8]. The majority of HPs are found in the fallopian tubes and are usually (70%) detected between 5 and 8 weeks of gestation. As gestational age increases, the diagnosis becomes less common, with approximately 20% of diagnoses occurring between 9 and 11 weeks and less than 10% occurring after 11 weeks [9].

Clinical symptoms of HP include abdominal pain, vaginal bleeding, and spotting. It may also present as an adnexal mass in the context of an enlarged gravid uterus, with or without peritoneal irritation [10]. The patient in this case was asymptomatic until 12 weeks of pregnancy. She had complained of pain and bleeding for two days prior to the surgery. A pelvic ultrasound revealed a mass in the left ovary, no ovarian or tubal rupture, and no blood in the abdominal cavity. The risk factors for heterotopic pregnancy are similar to those for ectopic pregnancies. These factors include tubal damage from pelvic inflammatory disease, previous ectopic pregnancy, endometriosis, tubal surgery, gamete intrafallopian transfer, in vitro fertilization, and ovulation induction [6]. In the current case, the patient had no risk factors. Early diagnosis of heterotopic pregnancy is critical because it is associated with hypovolemic shock, fetal loss, and maternal mortality [10].

Because of the concurrent intrauterine pregnancy, serial hCG measurements provide no information [4,5]. The likelihood of detecting heterotopic pregnancy will increase with the presence of risk factors but misdiagnosis or delayed diagnosis of spontaneous heterotopic pregnancy will remain a challenge for gynecologists [11]. The mother's condition was stable in this case, but the contents of the uterus and ovaries were not viable, as revealed by transvaginal and pelvic ultrasound. A B-hCG test was not performed.

Heterotopic pregnancy can be treated in three ways. First, some cases can resolve spontaneously. However, no clear guidelines or tests exist to determine which patients this applies to [12]. The second option is medical treatment. Using laparoscopy or transvaginal sonography, potassium chloride or hyperosmolar glucose can be injected into the intact heterotopic gestational sac or fetus. Other medications, such as methotrexate and prostaglandins, cannot be used because they may harm an intrauterine pregnancy. These two options are only applicable in a very limited number of situations [13]. The third option is to surgically remove the ectopic pregnancy. Laparotomy was commonly used in the past, but laparoscopy is now preferred due to faster postoperative recovery [14]. In patients who are hemodynamically stable, laparoscopic management should be considered instead of laparotomy [6]. The current case was managed laparoscopically, but the ovary was preserved, and no complications occurred during or after surgery.

4. Conclusion

The ovary is not a common site for heterotopic pregnancies. Heterotopic pregnancy can be a life-threatening condition for both the mother and the fetus. As a result, early ultrasound of the adnexa during the first trimester should be routine in order to obtain an accurate diagnosis and proper management even in the absence of related risk factors.

Contributors

Gulan Maree contributed to acquisition and analysis of data as well as drafting of the case report.
Sozan Mohammad contributed to the data collection and management of this case, was involved in patient care, and contributed to acquisition and analysis of data as well as drafting of the case report.
Zuhur Moualla contributed to the data collection and management of this case, and was involved in patient care.
Lynn Alshoumary contributed to the data collection and management of this case, and was involved in patient care.
Rouba Makhos contributed to the data collection and management of this case.
Ahmad Alfarra contributed to the data collection and management of this case, and was involved in patient care.
All authors approved the final article to be submitted.

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Patient consent

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Conflict of interest statement

The authors declare that they have no conflict of interest regarding the publication of this case report.

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