

Hypovolemic shock following induced abortion and spontaneous heterotopic pregnancy

Abdolghader Pakniyat, Arash Yazdanbakhsh, Ghasem Moshar-mowahed, Fatimah Talebi

Abstract

Spontaneous heterotopic pregnancy is a rare clinical condition in which intrauterine and extrauterine pregnancies occur at the same time. It is rare, estimated to occur in 1 in 30,000 pregnancies. The case was a 38-year-old woman with spontaneously conceived heterotopic pregnancy. She was admitted to our center with hypovolemic shock. Focused assessment sonography for trauma examination in emergency department showed large amount of free fluid in peritoneal cavity. She was managed surgical laparotomy. Considering spontaneous pregnancies, physician should be aware of the possibility of heterotopic pregnancy in all reproductive age women, especially those with history of recent abortion. It can occur without any predisposing risk factors. Patients should be informed about possible side effects of nonprescription medicines, and also the health care centers must be safe peaceful environment for them without severe legal consequences.

Keywords: Abortion, heterotopic pregnancy, hypovolemic shock

Access this article online

Website: www.ijccm.org

DOI: 10.4103/0972-5229.171407

Quick Response Code:



Introduction

Heterotopic pregnancy refers to the presence of simultaneous occurrence of two or more implantation sites. Most often these sites are a combination of intrauterine and ectopic pregnancies (EPs), rather than two EPs.^[1]

Heterotopic pregnancy is rare, estimated to occur in 1 in 30,000 pregnancies.^[1] The incidence of heterotopic pregnancy has been increased to approximately 1 in 3900 pregnancies because of increasing pelvic inflammatory disease, administration of ovarian stimulation agents, and use of assisted reproductive techniques (ART).^[2]

The clinical features of heterotopic pregnancies closely mimic the symptoms of threatened abortion and EP, including abdominal pain, adnexal mass, peritoneal irritation, and an enlarged uterus; these patients are

diagnosed at late gestational age (e.g. 16 weeks) because when an intrauterine gestation is observed on ultrasound, the possibility of an extra EP is generally not considered.^[3] Hence, these women are at risk of EP rupture that results in acute abdomen and hemorrhagic shock.^[4]

We present a rare case of heterotopic pregnancy that missed following abortion and ruptured left tubular pregnancy in a natural conception.

Case Report

A 38-year-old woman (0 gravida, 0 para, 0 abortions) presented in the emergency department with clinical features of shock. She had history of vaginal spotting because of induced abortion following administration

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From:

Department of Emergency Medicine, Arak University of Medical Sciences, Arak, Iran

Correspondence:

Dr. Abdolghader Pakniyat, Student Research Committee, Department of Emergency Medicine, Arak University of Medical Sciences, Arak, Iran.
E-mail: abdolghader.pakniyat@gmail.com

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How to cite this article: Pakniyat A, Yazdanbakhsh A, Moshar-mowahed G, Talebi F. Hypovolemic shock following induced abortion and spontaneous heterotopic pregnancy. *Indian J Crit Care Med* 2015;19:728-30.

of misoprostol at 40 days ago (3 weeks gestational age). She had administered misoprostol without any medical care for abortion. The patient had no complaints during this period until the abdominal pain had begun from 5 days ago. Transvaginal ultrasound showed residual pregnancy in the uterus (she did not bring her ultrasound report), so dilation and curettage were performed for clearing residual material in another hospital and she was discharged. Abdominal pain continued and was accompanied by weakness and fainting and she was managed as an outpatient.

At presentation to the Emergency Room, she was alert but pale with undetectable blood pressure and she reported that she had fainted twice at home. The abdominal examination revealed severe generalized tenderness. Focused assessment sonography for trauma examination showed a large amount of free intraperitoneal fluid [Figure 1]. The patient resuscitated with 2 L of crystalloids, albumin, and 2 units of blood transfusions. The hemoglobin (Hb) concentration was 6.5 g/dL, the hematocrit (Hct) was 23.2%, and white blood cell counts were 18,800, and urine pregnancy test was positive. The patient was counseled to undergo emergency operative laparotomy. At laparotomy, 600 cc clot and 1500 cc blood were drained from the peritoneal cavity. When the ovaries were exposed, there was active bleeding from the fimbriae, so left salpingectomy and left cornea resection were performed, and the peritoneal cavity was lavaged with about 2 L of saline. Histologic examination revealed chorionic villi. Renal function remained normal. Hb/Hct and beta-human chorionic gonadotropin (B-HCG) were checked during hospitalization and were satisfactory. The patient was discharged on the 8th postoperative day. She was counseled for continued follow-up and serial B-HCG checks.



Figure 1: Free fluid in focused assessment sonography for trauma examination

Discussion

A heterotopic gestation is difficult to diagnose clinically. Heterotopic pregnancy can occur in different type: Intrauterine pregnancy and tubal, cervical, abdominal, corneal, or ovarian pregnancy and most of extrauterine pregnancies were located in the fallopian tube (72.5%).^[5] The incidence was originally estimated on theoretical basis to be 1 in 30,000 pregnancies.^[6,7]

Heterotopic pregnancy may be considered, as consequence of modern reproductive medicine. The increased incidence of multiple pregnancies with ovulation induction and *in vitro* fertilization increases the risk of both ectopic and heterotopic gestation. The hydrostatic forces generated during embryo transfer may also contribute to the increased risk.^[6] Spontaneous heterotopic pregnancy is potentially a fatal condition. Clinicians should suspect heterotopic pregnancy in all patients presenting with amenorrhea, abdominal pain, adnexal mass, peritoneal irritation, and enlarged uterus, even if an intrauterine pregnancy has been confirmed. A high index of suspicion should be maintained for women with risk factors for an EP and in low-risk women with intraabdominal free fluid with or without an adnexal mass.^[8]

If ART is not involved, the suspicion of HP could be low, leading to delayed diagnosis. The presence of an intrauterine pregnancy, either viable or not, may mask the ectopic component of a heterotrophic pregnancy, resulting in delay of diagnosis. The ultrasound visualization of heart activity in both intrauterine and extrauterine gestations is important for diagnosis but rare. During an ultrasound examination, an ovarian pregnancy is easily mistaken for corpus luteum. The early diagnosis of heterotopic pregnancy is difficult; B-HCG alone is not helpful to diagnosis heterotopic pregnancy, and it should be considered more likely following assisted reproduction techniques, with chorionic gonadotropin levels rising in induced or spontaneous abortion, if the uterine fundus is larger than for its date, if there are more than one corpus luteum with natural conception, and when vaginal bleeding is absent in the presence of signs and symptoms of ectopic gestation.^[9] The diagnosis is often made during operation or after the histopathological report.

In summary, the patient was a 38-year-old married woman without risk factors for EP presented with ruptured tubal pregnancy with hemodynamic instability due to hemoperitoneum. She had an unwanted pregnancy due to unprotected intercourse. She had an

unsupervised abortion by misoprostol. After misoprostol administration, she had vaginal spotting. She did not go back for follow-up due to fear of the legal consequences of abortion.

Considering spontaneous pregnancies, physician should be aware of the possibility of heterotopic pregnancy in all reproductive age women, especially who with history of recent abortion. It can occur without any predisposing risk factor. Clinical suspicion followed by an early surgical laparoscopic intervention can minimize maternal morbidity.^[10] Patients should be informed about the possible side effects of nonprescription medicines.

Acknowledgment

There is no doubt that the publication of the present case report would not have been possible without the cooperation of the patient and colleagues, especially of the Gynecology Department. We acknowledge their contribution towards the successful management of the patient.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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