Heterotopic pregnancy in a natural conception cycle

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ABSTRACT

Introduction: Heterotopic pregnancy is a rare event in natural conception cycles. Diagnosis of heterotypic pregnancy requires a high index of suspicious. Described here in is a reported case of Heterotopic pregnancy presenting as adnexal mass.

Case: A young nulliparous woman with her last menstrual period 10 weeks before presentation complained of hypogastric pain beginning about 2 weeks ago.

Initially the pain started from upper abdomen, then distributed to the hypo gastric region and then localized in LLQ accompanying with nausea.

Transabdominal sonography diagnosed intra uterine 9.5 weeks live pregnancy with a heterogeneous mass with approximate diameter of 7 cm and moderate free fluid in pelvic cavity suggesting of torsion of left ovarian cyst or ectopic pregnancy. Emergency laparotomy revealed ruptured ectopic mass in the midportion of left fallopian tube. The uterus was soft and enlarged (a pregnant uterus). Salpingectomy was performed. Eventually a healthy baby was delivered at 37 weeks.

Conclusion: Although heterotopic pregnancy is a rare event, it should be considered in the situation of viable intrauterine pregnancy and tender adnexal mass.

Keywords: Heterotopic pregnancy, tubal pregnancy, salpingectomy

Introduction

Heterotopic pregnancy, a rare event in which the coexistent gestations occur at 2 or more implantation sites, is associated with a significant maternal morbidity and mortality. The frequency is reported to be from 1 in 30,000 to 1 in 3,889 pregnancies.^{1, 2} Tal et al have reported that the incidence of heterotopic may rise up to 1 in 100 pregnancies, where conception is assisted by induction of ovulation and in vitro fertilization.³ Diagnosis of heterotopic pregnancy is often delayed and requires high index of suspicion. Clinical symptoms and signs, history, physical examination, and laboratory and ultrasonographic features are often nonspecific.^{4,5}We report here a rare case of heterotopic pregnancy in which the ectopic pregnancy implanted into the left fallopian tube and treated with salpingectomy and intrauterine pregnancy continued up to term.

Case report

A 22-year-old woman, gravid 1, parity 0, visited our gynecologic clinic with hypogastric pain in the presence of live intra uterine pregnancy. The patient reported 10 weeks of amenorrhea, and got married 4 months before presentation. She had no history of pelvic inflammatory disease, abdominal surgery, or treatment for induction of ovulation.Vital signs were stable (BP: 120/80 mmHg, PR: 75/min, RR: 16/min).Pelvic exam showed cervical motion tenderness. She had an enlarged uterus with a closed cervix and a very tender left adnexal mass. Her blood type was A⁺. Her hemoglobin concentration was 10.9 g/dl, WBC was 7.37*10³/dl and platelet count was 272*10³/dl.Transabdominal sonography after 6 weeks of LMP demonstrated a live 6.5 weeks intrauterine pregnancy, normal ovaries, moderate free fluid in pelvic cavity, suggesting ruptured ovarian cyst. Three weeks after the first sonography the patient came to our clinic with severe lower abdominal pain, suprapubic pain and tenderness. Transabdominal and transvaginal sonography both showed a live intrauterine fetus, 7weeks 5days with normal right ovary. A heterogenous mass about 7 cm diameter was present in the left adnexum, in addition moderate amount of free fluid was noted in pelvic cavity suggesting torsion of left ovarian cyst or ectopic pregnancy.

Shortly after hospitalization, emergency laparotomy confirmed the patient had ruptured tubal pregnancy in the mid portion of the left fallopian tube. Ampoullary part ectopic mass was 4*5 cm in diameter and approximately 200 cc organized clot in cul de sac with adhesion to omentum, pelvic floor, and anterior surface of uterus. Fig 1

Left salpingectomy was performed. The pathology report confirmed tubal ectopic pregnancy. Fig 2

The patient had an uneventful postoperative course. She discharged from hospital on the third day after operation. Eventually she underwent emergency cesarean section due to PROM and pelvic contraction at 37 weeks, in our hospital and a healthy baby was born.

Discussion

The preoperative diagnosis of a heterotopic pregnancy is undoubtly a major challenge in modern reproductive medicine. Recently regard the common presenting signs and symptoms for heterotopic pregnancy as abdominal pain, adnexal mass, peritoneal irritation, and an enlarged uterus, these presentations are, however, nonspecific and may be confused with other normal or abnormal pregnancy manifestations.⁶ The ultrasound visualization of heart activity in both intrauterine and extrauterine gestations is important for diagnosis, but rare.⁷ More over, the appearance of the heart beat may differ in its time of onset.⁸ Fa and Gerscovich⁹ regard transvaginal ultrasonography as an important aid in the diagnosis of heterotopic pregnancy, but ultrasonographic identification of ectopic pregnancy is low in its sensitivity. It's difficult to differentiate an embryonic adnexal gestational sac from a hemorrhagic corpus luteal cyst. Ectopic pregnancy is a recognized complication of in-vitro fertilization (IVF) approximates to 1%.¹⁰The Bourn Hall group in UK reported a 0.75% rate among 2650 clinical pregnancies. While a multicenter UK study reported a 1.3% rate among 2234 pregnancies.¹⁰ An international collaborative patient registry reported a heterotopic pregnancy rate of 0.83% among 601 clinical pregnancies resulting from 2092 gamete intrafallopian transfer (GIFT) procedures. Australian group reported an incidence of 1%.¹⁰ several etiological mechanisms have been suggested to contribute to the relatively high rate of heterotopic pregnancy resulting from assisted reproductive procedures,¹⁰ these include the transfer of excessive numbers of embryos in to the fallopian tube, the uterine location of embryo transfer, accidental direct injection of embryos into the fallopian tube, retrograde passage of embryos into the tube due to hydrostatic forces, the volume of transfer medium and the extremely rare possibility of uterine perforation during embryo transfer.

Heterotopic pregnancy in our case occurred in a nulliparous woman who got married 4 months before presentation with no previous history of assisted reproductive procedures or any other predisposing factor. This makes our case report attractive and significant.

Surgical therapy has been the traditional mainstay, but involves surgical and anesthetic risks to both the mother and the intrauterine pregnancy. Louis-Silvester et al (1997) noted a 40% loss of viable intrauterine pregnancy after laparoscopy.¹⁰ Our case left the hospital uneventfully and a healthy baby was born at term. We conclude that although heterotopic pregnancy is a rare event in normal conception cycles it should be considered in viable intrauterine pregnancy with tender adnexal mass and a physician should be suspicious of pregnancy related complications. Early diagnosis and early intervention enables us to use conservative surgery or even modified therapy to preserve future fertility.

Conflict of Interest: None declared.

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Figure 1: Intraoperative findings, showing an enlarged pregnant uterus and ruptured ectopic mass



Figure 2: Pathologic findings showing placental villi, cytotrophoblasts (black arrow) and syncytiotrophoblasts (white arrows)