



PRIMARY OVARIAN PREGNANCY : A CASE REPORT AND REVIEW OF THE LITERATURE

PRİMER OVARIAN GEBELİK: OLGU SUNUMU VE LİTERATÜR DERLEMESİ

İsmail Mete İTİL

Özge ÖZCAN

Mustafa Coşan TEREK

Senay AYGÜL

Department of Obstetrics and Gynecology, Ege University Faculty of Medicine, Izmir, Turkey

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SUMMARY

Ovarian pregnancy is the most common type of non-tubal ectopic pregnancy. The diagnostic criteria for ovarian pregnancy were described by Spiegelberg. We report a 31-year-old patient with secondary amenorrhea after a first trimester pregnancy termination. The patient underwent laparoscopic operation for the right ovarian cyst and the mass on the posterior surface of the uterus. Subsequently histopathologic examination of the laparoscopically extirpated cyst revealed an ovarian pregnancy.

ÖZET

Ovarian gebelik en sık görülen non-tubal ektopik gebeliktir. Ovarian gebeliğin tanı kriterleri Spiegelberg tarafından tanımlanmıştır. 31 yaşında bayan hasta ilk trimester gebelik vonlanması sonrasında sekonder amenore ile kliniğimize başvurdu. Hastaya sağ overde mevcut olan sağ over kisti ve uterus arkasındaki lezyon için laparoskopi uygulandı. Laparoskopik olarak çıkarılan kistin histopatolojik incelemesi ovarian gebelik olarak geldi.

INTRODUCTION

Ectopic pregnancies are most commonly seen in fallopian tubes. The frequency of ovarian pregnancy is less than a tubal pregnancy and constitutes 0.5-1% of all ectopic pregnancies (1). Pelvic pain, amenorrhea and vaginal bleeding are the foremost classical symptoms found in these cases. Abdominal pain is the most common presenting complaint, but the severity and nature of the pain varies widely. Ovarian pregnancies could be misdiagnosed because they are mostly and easily confused with a ruptured corpus luteum.

Here, we report a patient with an ovarian pregnancy who was diagnosed after the laparoscopic extirpation of an ovarian cyst.

CASE REPORT

A 31-year-old nulliparous woman admitted to gynecology clinic with the complaint of secondary amenorrhea. Her last menstrual period was six weeks ago.

She had a history of termination of an undesired first trimester pregnancy by D&C two weeks ago. Her main complaint was the delay of menstrual period after D&C. Pelvic examination revealed a mass on the posterior wall of uterus which was two cm in diameter. She had no abdominal tenderness. A pelvic Doppler sonographic examination revealed a tumoral lesion which was 27 x 17 mm in diameter – resembling a mural or a subserous myoma on the posterior wall of the uterus. This sonographically heterogeneous mass showed hyperechogenic regions which were identified as increased vascularity at Doppler sonographic examination. Endometrial thickness was 5 mm and was irregular.

There were physiologic follicles in both ovaries and a ruptured cyst of 14 mm in diameter at the right ovary.

β -human chorionic gonadotropin level 2675 mIU/ml. The patient underwent a diagnostic laparoscopy. Laparoscopic examination revealed a hemorrhagic mass of approximately 2 cm in diameter on posterior surface of the uterus. This mass seemed to be an organized hematoma occurred after the possible perforation of the uterine wall during aspiration curettage and it started to bleed readily with a single touch of laparoscopic forceps (Figure 1).

Yazışma adresi: İsmail Mete İTİL, Department of Obstetrics and Gynecology, Ege University Faculty of Medicine, İZMİR, TURKEY

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Figure 1. The laparoscopic appearance of uterine perforation site healing with granulation tissue

During the operation a cyst of approximately 15 mm in diameter on right ovary was removed by partial oophorectomy and subsequently a revisional curettage was performed (Figure 2).



Figure 2. The laparoscopic appearance of ovarian pregnancy

Histopathologic examination of the specimen revealed ovarian pregnancy. Revisional curettage showed decidual endometrium. Serum beta human chorionic gonadotropin level was found to be decreased to 363 mIU/mL after one week of the operation

DISCUSSION

Ovarian pregnancy is an uncommon presentation of ectopic gestation being 0.5-1.0% of all ectopic pregnancies (1). In 1950s the incidence of primary ovarian pregnancy was one in 40,000 pregnancies and increased further with an incidence of one in 7,000 pregnancies for the year 1983 (2,3). Usually it ends with rupture before the end of first trimester. It is important to distinguish primary ovarian pregnancy from tubal pregnancy and hemorrhagic ovarian cyst, because they have same symptoms. It has been reported that ovarian pregnancy is

diagnosed as a hemorrhagic corpus luteum in two-thirds of cases (4,5).

Ovarian pregnancies can be diagnosed by the following criteria of Spiegelberg (6,7) :

- 1- The fallopian tube on the affected side must be intact.
- 2- The fetal sac must occupy the position of ovary
- 3- The ovary must be connected to the uterus by the ovarian ligament
- 4- Ovarian tissue must be located in the sac wall.

Bouyer et al reported that unlike tubal gestation, ovarian pregnancy is neither associated with pelvic inflammatory disease nor infertility (8). The only risk factor associated with the development of ovarian pregnancy is the current use of intrauterine device. Intrauterine device is effective in preventing intrauterine and tubal pregnancies in 99.5% and 95% respectively. However it has little effect on the prevention of an ovarian pregnancy (9). The rate of intrauterine device use in reported ovarian pregnancies is 17 to 25% (3). Raziel et al reported that 90% of ovarian pregnancies occurred in intrauterine device users (10).

In addition, De Seta et al reported that pelvic inflammatory disease causes an increased risk of intrafollicular pregnancy due to hampered follicular dehiscence by inducing reduction in tubal motility and thickening of ovarian albuginea (11). Grimes and Matseoane noted prior history of pelvic inflammatory disease in 42% and 46% of ectopic pregnancies, respectively (3,12).

Several theories have been suggested to explain ovarian implantation such as reflux of the conceptus following a normal fertilization from the fallopian tube along with blood from the uterus (3) or fertilization occurs within the follicle following defective ovum release at ovulation (4). Since ovarian pregnancy may result from in vivo fertilization of unrecovered oocytes, patients should be informed to avoid intercourse near the time of ovulation (13).

Conservative treatment, as in tubal pregnancy, is of the utmost importance if the patient is young and desires to bear children in ovarian pregnancy. Methotrexate is an effective therapeutic option in the management of unruptured ovarian ectopic pregnancy. It permits to avoid more invasive interventional surgery, with possible complications such as hemorrhage, ovariectomy or later pelvic adhesions (14).

In the past oophorectomy has been advocated as treatment of ovarian gestations, but ovarian cystectomy, mostly by laparoscopic techniques, is now the preferred procedure (15,16). For selected ovarian pregnancies an alternative therapy by the use of methotrexate or prostaglandin may possibly minimize adhesion formation and optimize future fertility. The first successful case of treatment of unruptured ovarian pregnancy by prostaglandin was reported in 1990 by Koite et al (17). It is followed by the first successful case of treatment of unruptured ovarian pregnancy by methotrexate by Shamma and Schwartz in 1992 (18) These conservative methods are questionable since histologic proof in diagnosis does not exist meeting Spiegelberg's criteria. Recently, Mittal et al (14) reported the third case of successful treatment of an ovarian pregnancy with methotrexate. Similarly Chelmow et al treated an ovarian

pregnancy diagnosed by laparoscopy with methotrexate (19). In our patient there was a history of 6 weeks amenorrhea without any accompanying abdominal pain or tenderness and vaginal bleeding. These symptoms did not meet the classical triad of ectopic pregnancy symptoms. Furthermore absence of intrauterine device in the present patient resulted in a clinical dilemma. In our patient laparoscopic exploration rather than medical treatment

with methotrexate was preferred because of the presence of unidentified ovarian cyst. During laparoscopic examination a cyst of 15 mm in diameter on right ovary resembling to a ruptured corpus luteum was diagnosed as the ovarian pregnancy after histopathologic examination. This case demonstrates that ovarian pregnancy may be diagnosed and treated effectively with cystectomy by the use of operative laparoscopy.

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