Primary Omental Heterotopic Pregnancy in a Spontaneous Cycle: Case Report

Spontan Siklusta Gelişen Primer Omental Heterotopik Gebelik

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ABSTRACT Heterotopic pregnancy is diagnosed in the presence of multiple pregnancies with one or more intrauterine pregnancies co-existing with an ectopic pregnancy. We examined a 34 year old patient who was gravida 5 para 4, with 8 week pregnancy presenting with acute abdominal symptoms. Laparotomy was performed and along with the intrauterine pregnancy, an ruptured ectopic pregnancy was observed on the omentum and partial omentectomy was performed. Abdominal heterotopic pregnancy is a rare event but is associated with significant morbidity and mortality. Omental heterotopic pregnancy is a very rare form of heterotopic pregnancy. Omental pregnancy can be rather difficult to identify. During surgical exploration, with intact tubes and ovaries, omentum should be checked as a possible implantation site.

Key Words: Abdominal pregnancy; ectopic pregnancy

ÖZET Bir veya daha fazla intrauterin gebelikle birlikte, ektopik gebeliğin olması heterotopik gebelik olarak tanımlanmaktadır. Biz bu sunumuzda; 34 yaşında gravida 5, parite 4 , doğal siklusta oluşmuş 8 haftalık gebeliği ve akut batın bulguları olan bir olguyu inceledik. Hastaya laparotomi uygulandı ve intrauterin gebeliğin yanında rüptüre olmuş omental ektopik gebelik saptandı. Hastaya parsiyel omentektomi yapıldı. Abdominal gebelik nadir olmasına rağmen, morbidite ve mortalite oranı oldukça yüksektir. Abdominal gebelik değişik biçimlerde izlenebilir, omentum yerleşimli abdominal gebelik oldukça nadirdir. Heterotopik gebelik nedeniyle cerrahi uygulanan hastalarda omental ektopik gebeliği tespit etmek zor olabilir. Cerrahi eksplorasyon sırasında, tuba ve overler normalse, omentum olası implantasyon bölgesi olarak dikkatle incelenmelidir.

Anahtar Kelimeler: Abdominal gebelik; ektopik gebelik

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Heterotopic pregnancy, defined as the simultaneous development of an extrauterine along with an intrauterine pregnancy, is a very rare event, even in the context of ectopic pregnancy. Duverney first described this diagnosis in 1708 in autopsy findings of a patient who expired from an ectopic pregnancy.[1] The incidence of heterotopic pregnancy varies between 1/30.000 and 1/40.000 but the prevalence of heterotopic pregnancies has been reported to rise to as high as 1-2% due to the use of assisted reproductive technology and ovulation-inducing agents.[2,3] The ectopic pregnancy can be tubal, ovarian, cervical, cornual or abdominal.[4] Tubal ectopic pregnancies are the most common. Abdominal pregnancy affects 1 in 10.000 deliveries. The maternal mortality rate is nearly 6%, and the clinical pres-

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entation extremely variable.[5] Omental pregnancy is a very rare form of ectopic pregnancy. To our knowledge there is not primary omental heterotopic pregnancy in the literature.

In this report, we present a case of spontaneously developed primary omental heterotopic pregnancy .

CASE REPORT

A 34 year old gravida 5, para 4 woman was admitted to Emergency Clinic of the Taksim Training and Research Hospital for acute abdominal pain. She was 8 weeks pregnant. It was a spontaneous conception and there was no past history of pelvic inflammatory disease or any history of abdominal surgery. On examination, she was pale with a pulse rate of 110 per minute and blood pressure of 90/60 mmHg. Abdominal examination revealed diffuse, lower abdominal tenderness with significant guarding and rigidity. Pelvic examination revealed an anteverted, enlarged, soft and tender uterus corresponding to 8 weeks of pregnancy. The cervical os was not dilated and there was no vaginal bleeding. Ultrasound scan (transvaginal) demonstrated an intrauterine pregnancy with crown-rump length of 15 mm corresponding to a gestational age of 8 weeks (Figure 1). Both the ovaries were normal; however, the pouch of Douglas was filled with free fluid. We did not observe corpus luteum cyst. Her hemoglobin was 7.6 g/dl with a normal white blood count and platelet count. The diagnosis of ruptured corpus luteum cyst and normal intrauterine pregnancy was made. An exploratory laparotomy was carried out through pfannenstiel incision, 1.000 ml of hemoperitoneum was drained. Both the right and left tubes, and ovaries and adnexa were normal. As no obvious bleeding source was seen in the pelvis further exploration of the upper abdomen was done. There was a palpable nodular lesion on the omentum. A bleeding site and a gestational sac were found (Figure 2), and partial omentectomy was performed. Histopathological report confirmed an omental ectopic pregnancy (chorionic villi and placental site reaction was noted on the omental tissue) (Figure 3). The postoperative period was unremarkable. The patient was discharged on the third postoperative day without any complications and the ongoing pregnancy reached term uneventfully. At 39 weeks gestation she went into spontaneous labor and delivered a healthy male baby with no congenital malformation. Postnatal recovery was uneventful and both mother and baby were discharged.

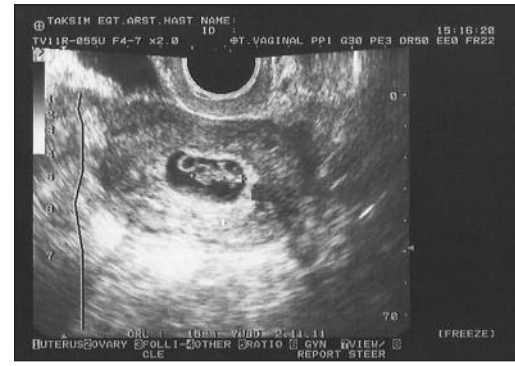

FIGURE 1: Intrauterine pregnancy showing fetal pole with a crown-rump length of 15 mm. Fetal heart activity was visualised.

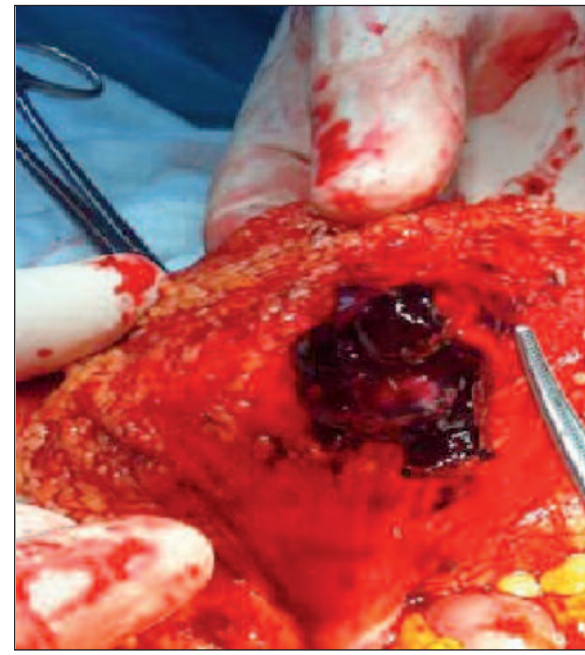

FIGURE 2: Omental pregnancy.
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DISCUSSION

Heterotopic pregnancy is diagnosed in the presence of multiple pregnancies with one or more intrauterine pregnancies co-existing with an ectopic

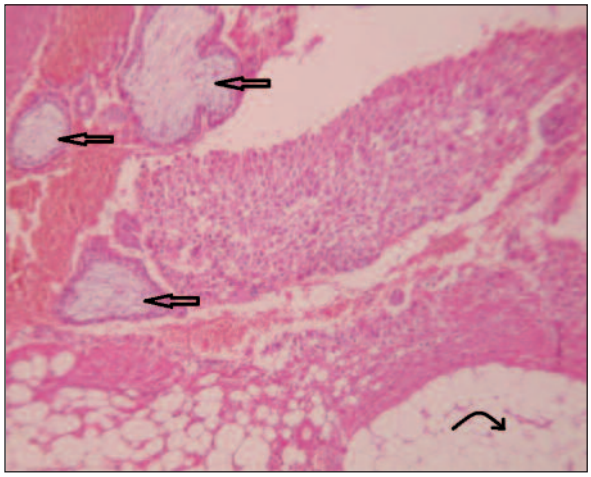

FIGURE 3: Histopathologic slide of omental pregnancy (stained by haematoxylin-eosin under light microscope with x100 magnification). Omental tissue (curved arrow) and chorionic villi seen (arrows).
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pregnancy. The ectopic pregnancy can be tubal, ovarian, cervical, cornual or abdominal. Tubal ectopic pregnancies are the most common. The occurrence of a heterotopic pregnancy is considered rare in natural conception cycles with an incidence of 0.08%, but incidence increases to as high as 1% with assisted reproductive techniques.[1,6-8] Abdominal pregnancy occurs in 1.4% of all ectopic pregnancy cases, and omental pregnancy is the least common form of abdominal pregnancies. The mortality rate for abdominal pregnancy is seven times higher than non-abdominal cases.[9] Although there has been no consensus for the diagnosis of primary omental pregnancy, there are Studdiford's criteria:

(i) normal bilateral Fallopian tubes and ovaries with no recent or remote injury;

(ii) absence of any uteroperitoneal fistula;

(iii) presence of a pregnancy related exclusively to the peritoneal surface and early enough to eliminate the possibility of implantation following a primary nidation in the tube.[10,11]

Clinical, ultrasonographic, histopathological and surgical findings must be combined to diagnose a case as a primary omental pregnancy.

Risk factors include a history of tubal pregnancies, pelvic inflammatory disease, tubal sterilization and tubal infertility or tubal reconstructive surgery. Other women at risk include those who conceive despite the use of an intra- uterine contraceptive device or progestogen only contraceptive pills.[12]

Heterotopic pregnancy is often diagnosed late and with significant morbidity and some mortality. Patients sometimes present with nonspecific abdominal pain. Studies often fail to show adnexal masses or are misinterpreted because of the coexistent intrauterine pregnancy. Clinicians biggest pitfall is failure to consider this diagnosis and institute early treatment. If treatment is instituted early, the prognosis for intrauterine pregnancy is much better, with one study showing 75% of patients delivering full term, 16%preterm and only %9 experiencing stillbirth or spontaneous abortion, after laparotomy.[8]

Although both laparotomy and laparoscopy are appropriate procedures in the management of heterotopic pregnancies, the overall paucity of experience with laparoscopy has caused many surgeons to manage these challenging cases with laparotomy. In laparoscopic exploration, a gynecologist must have high index of suspicion otherwise an omental pregnancy can easily be missed. In addition, during laparoscopic approach, control of haemorrhagia can be difficult because of trophoblastic invasion of omental vasculature. If a pregnancy invades the omentum deeply and broadly, laparotomy is necessary.[13] Conservative treatment by local injection under ultrasound guidance of a feticidal or placentotoxic substance is an option. The substance should not cause any deleterious effect to the viable intrauterine pregnancy. Commonly used drugs such as methotrexate and etoposide have teratogenic effects and are best avoided in a heterotopic pregnancy with a viable intrauterine pregnancy. Other agents such as potassium chloride and hyperosmolar glucose have been used successfully though none have been tried when the ectopic site was in the ovary.[14,15] We performed laparotomy because our patient was not stabile hemodinamicaly.

Usually, omental pregnancies are divided into two categories: primary and secondary. In primary

omental pregnancy, histological evidence of neovascularization or growth of trophoblast into the supporting tissue must be found. However, in the absence of histological evidence of neovascularization or growth of trophoblast into the supporting tissue, all cases should be considered as secondary omental pregnancy.[16] In our pathological sections, extensive villus formation and dense trophoblastic invasion deep into the omental tissues including blood vessels were seen. The histopathological findings proved our case to be a primary omental heterotopic pregnancy.

In conclusion, abdominal heterotopic pregnancy is a rare event but is associated with significant morbidity and mortality. Omental pregnancy can be rather difficult to identify. During surgical exploration, with intact tubes and ovaries, omentum should be checked as a possible implantation site.

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