

Successful Pregnancy In A Patient With Unusual Ovarian Localization And Mullerian Duct Anomalies: A Case Report

Bir Olgu Sunumu : Olağandışı Over Lokalizasyonu Ve Müller Kanalı Anomalili Hastada Başarılı Gebelik

Mustafa ACET¹, Leyla ALTUNTAŞ¹, Sema OVALI¹, Tuba YELKE², Betül YORGUNLAR¹, Hale Aktün TAMER¹, Ebru ÖZTÜRK¹

¹ Medipol University, Medical School, Department of Obstetrics and Gynecology, İstanbul, Turkey

² Medipol University, Medical School, Department of Embryology, İstanbul, Turkey

ABSTRACT

In this article we aimed to describe the clinical findings in a patient with subhepatic right ovary and müllerian duct anomalies who was successfully treated with in vitro fertilization (IVF) due to male factor infertility. Ovarian maldescent is a rare condition, and ovary localization can be seen up to the subhepatic region. This unusual ovarian localization suggests ovarian maldescent can be anywhere between the liver and pelvic brim. When required, transabdominal ultrasound-guided oocyte retrieval and IVF can be performed successfully.

Keywords: Maldescent ovary, mullerian duct anomalies, in vitro fertilization.

ÖZ

Sağ over lokalizasyonu subhepatik alanda izlenen ve Müller kanal anomalileri bulunan bu olguda male faktör sebebiyle ivf uygulanmıştır. İnmemiş over lokalizasyonu nadir görülmekle birlikte, görüldüğünde sıklıkla pelvis giriminde olmaktadır. Bu olguda literatürde ilk defa bu kadar yüksek seviyede yani subhepatik bölgede yerleşmiş bir over lokalizasyonu belirtilmiştir. Male faktör sebebiyle IVF uygulanan hastaya abdominal oosit toplama işlemi yapılmış, inmemiş over olgularında overin pelvik giriminden subhepatik alana kadar herhangi bir alanda olabileceği fikri savunulmuştur.

Anahtar Kelimeler: İnmemiş over, müllerian kanal anomalisi, in vitro fertilizasyon.

Introduction

A wide range of malformations of mullerian duct system are some of the more challenging disorders of obstetricians and gynecologists (1).

In the literature ovarian maldescent has been defined as the attachment of the superior pole of the ovary above the level of pelvic brim (2). Although the embryologic cause of ovarian maldescent is uncertain, the incidence of ovarian maldescent is increased in patients with mullerian duct anomalies (MDA) (3).

In this case, we present an infertile woman with uterus didelphys and complete vaginal longitudinal septum together with maldescended right ovary located high in the subhepatic region. Maldescent of ovary with MDA was reported rarely in the literature, this is the first case of subhepatic localization of ovary with MDA in an infertile patient who underwent in vitro fertilization.

Case Report

A 36 year-old woman applied to our clinic with 6 years of primary infertility. On her pelvic examination, a complete longitudinal vaginal septum and two cervixes were detected. Transvaginal ultrasound revealed two uterine horns and left ovary with naturel appearance. The right ovary could not be visualized.

A hysterosalpingogram was ordered which demonstrated a very long right tuba uterina just about to liver (Figure 1). We performed magnetic resonance imaging (MRI) in order to clarify the anomaly and surprisingly it revealed right ovary located high in the subhepatic region (Figure 2).

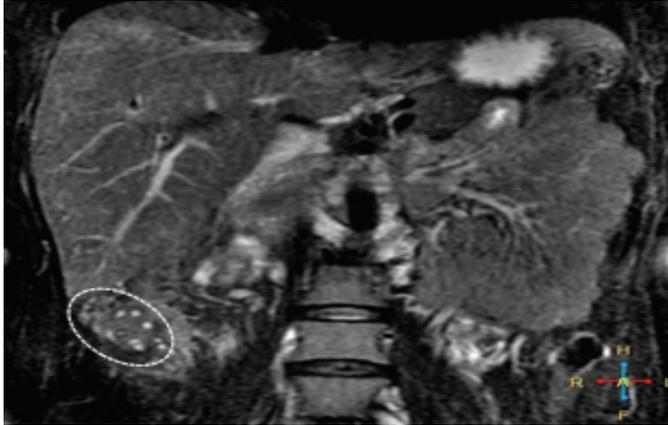
Figure 1. Hysterosalpingography (HSG) revealing uterus didelphys and very long right tuba uterina lying under the liver



Yazışma Adresi/ Correspondence Address:
Mustafa Acet, Ebru Öztürk
Medipol MEGA Hastanesi TEM Avrupa Otoyolu
Göztepe Çıkışı No:1 Bağcılar / İSTANBUL 34214
Tel/Phone: +90533 344 17 02
E-mail : ebruozturkarlan@yahoo.com

Geliş Tarihi/ Received:26/03/2015
Kabul Tarihi/ Accepted: 30/05/2015

Figure 2. Magnetic resonance imaging (MRI) revealing unusually localized right ovary



The ovarian tissue with multiple follicles was noticed inferior to the liver, posterior to the ascending colon in coronal and transverse MRI images. A hemorrhagic cyst which had a high signal on the T1-weighted MRI image, and no suppression of the signal with fat-saturation was detected. Hormonal analysis of the patient was normal. Sperm analysis showed severe oligoasthenoteratozoospermia. Cytogenetic analysis of the couple and Y-chromosome microdeletion analysis were all normal. Female one had a family history of pulmonary embolism and heterozygote Factor V Leiden gene mutation.

Three IVF cycles were carried out for male factor infertility following longitudinal vaginal septum resection. The first and second IVF cycles were performed with antagonist protocol and recombinant follicle-stimulating hormone at a 150 IU/ day dose was used. While transvaginal oocyte retrieval was applied for the left ovary, percutaneous ultrasoundguided aspirations was performed from the right ovary. In the first IVF cycle 5 oocytes from the left ovary and 11 oocytes from the right ovary were aspirated and one grade I embryo was transferred to the left uterine cavity on day three. Pregnancy could not be achieved.

In the second IVF cycle, 7 oocytes from the left ovary and 14 oocytes from the right ovary were aspirated and two blastocyst stage embryos were transferred to the left uterine cavity and three more blastocyst stage embryos were frozen. Again, no pregnancy could be achieved in the second cycle. In both cycles, we observed that left ovary was less responsive to the gonadotropins compared to the right one and follicles were smaller. Therefore, follicular aspiration from the right ovary was also performed. Two months later frozen embryo transfer cycle was started. In a natural cycle, a 19 mm dominant follicle was observed in the right ovary on cycle day 12. Endometrial thickness was 12 mm in the right cavity and 10 mm in the left. Serum estradiol level was 320 pg/ml, LH level was 50 mIU/ml. HCG at a dose of 10000 IU was administered on day 12. Luteal phase support was not performed. Low molecular weight heparin 0,4ml/day and acetylsalicylic acid 100 mg/day were initiated two days after hCG.

In the third treatment cycle, frozen embryo transfer cycle, two embryos were transferred, one to each uterine cavity. Beta hCG level was 220 mIU/mL ten days after embryo transfer and, one gestational sac with fetal heart beat in the right uterine cavity was observed on ultrasound three weeks after embryo transfer. Antenatal follow-up of the patient was uneventful and a 47 cm, 2910 g boy baby was delivered by caesarean section at 36,5 gestational week. No

complications occurred in the postpartum period and the patient was discharged on postoperative day two.

Discussion

In the third month of fetal life, the developing ovaries descend from a position near the kidneys to their final position in the pelvis. Failure of the ovaries to enter the true pelvis has been reported rarely, in 5 of 2,025 operative observations of patients evaluated and treated for infertility (2). In the current case, we present for the first time a patient with maldescended ovary which is located high in the subhepatic region. This unusual ovarian localization suggests ovarian maldescent can be anywhere between the liver and pelvic brim. Although, there is no clear association between ovarian maldescent and infertility, implications of ovarian maldescent for infertility treatment have not been discussed.

In vitro fertilization methods used in those patients often involve ovarian stimulation and oocyte retrieval. Typical oocyte retrieval via transvaginal route might be technically difficult for highly located, malpositioned ovaries, and alternative procedures such as laparoscopic or abdominal ultrasoundguided aspirations might be needed (3). Some authors suggest laparoscopic ovarian transposition in order to facilitate transvaginal oocyte retrieval (4). In this case, we performed oocyte retrieval from the right maldescended ovary under transabdominal ultrasound guidance and usual transvaginal route was used for the left follicular aspiration. Interestingly, better ovarian response was observed in the maldescended ovary compared to the normally localized left ovary in both ovarian stimulation cycles. Therefore, a higher number of oocytes were retrieved from the maldescended right ovary. In previous reports, investigators have suggested that the incidence of polycystic ovarian appearance is higher in patients with malpositioned ovaries (5).

In summary, we presented for the first time a woman with a maldescended right ovary located high in the subhepatic region and congenital uterine anomaly successfully treated with IVF for male factor infertility. Maldescended ovary is a rare condition which might be localized anywhere between the liver and pelvic brim and, when required transabdominal ultrasound-guided oocyte retrieval and IVF can be performed successfully.

References

1. Jones HW Jr. Mullerian anomalies. *Hum Reprod.* 1998;13:789-91.
2. Verkauf BS and Bernhisel MA. Ovarian maldescent. *Fertil Steril* 1996;65:189-92.
3. Allen JW, Cardall S, Kittjarukhajorn M, Siegel CL. Incidence of ovarian maldescent in women with mullerian duct anomalies: evaluation by MRI. *AJR Am J Roentgenol.* 2012;198:381-5.
4. Goodman DM, Yalcinkaya TM, Ragland C. Ovarian transposition: a novel surgical technique to maximize oocyte retrieval in women with mullerian anomalies. *Fertil Steril* 2013;100:395.
5. Dabirashrafi H, Mohammad K, MoghadamiTabrizi N. Ovarian malposition in women with uterine anomalies. *Obstet Gynecol* 1994;83:293-4.