

# Ectopic Pregnancy in The Remnant Uterine Tube in A Patient with Previous Unilateral Salpingo-Oophorectomy: Case Report

## Unilateral Salpingooferektomi Öyküsü Olan Hastada Kalan Uterin Tüpte Gelişen Ektopik Gebelik

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**ABSTRACT** Ectopic pregnancy in the remnant uterine tube following a previous salpingo-oophorectomy is a very rare condition. We report such a case managed by laparoscopy successfully. A 36-year-old woman with a history of previous right salpingo-oophorectomy admitted to our outpatient department complaining of abnormal vaginal bleeding. Transvaginal sonography revealed a 37 x 33 mm sized gestational sac in the right uterine cornu with an 11 mm CRL embryo with no detectable cardiac activity. The endometrium lining the 'empty' endometrial cavity was linear. Pelvic examination was normal. The problem was corrected by a laparoscopic resection of the affected uterine cornu and the remnant uterine tube. The possibility of an ectopic pregnancy should be considered in the differential diagnosis of every patient with a positive pregnancy test since it can be reported even in the remnant uterine tube of patients with a previous salpingo-oophorectomy.

**Key Words:** Laparoscopy; pregnancy, ectopic

**ÖZET** Salpingooferektomi sonrası geride bırakılan uterin tüpte gelişen ektopik gebelik çok nadir görülen bir durumdur. Bu makalede laparoskopi ile başarılı bir şekilde tedavi edilmiş böyle bir olgu sunulmuştur. Unilateral salpingooferektomi hikâyesi olan 36 yaşında hasta vajinal kanama şikâyeti ile polikliniğe başvurdu. Transvajinal ultrason incelemesinde sağ uterin kornu lokalizasyonunda 37 x 33 mm gestasyonel kese içinde CRL'si 11 mm kalp atımı olmayan embriyo izlendi. Endometriyal kavite boş, endometriyum düzensiydi. Pelvik muayene normaldi. Laparoskopik yaklaşımla etkilenen kornu ve kalan uterin tüp parçası gebelik materyali ile çıkarıldı. Salpingooferektomi hikâyesi olan hastada bile görülebildiğinden, gebelik testi pozitif saptanan tüm hastalarda ektopik gebelik olasılığı akla getirilmelidir.

**Anahtar Kelimeler:** Laparoskopi; gebelik, ektopik

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**A**n ectopic pregnancy is defined as implantation of the gestational sac in a place other than the endometrial cavity. Its incidence has increases in the last few decades. Though improvements in diagnostic techniques may contribute to this increase, other factors such as increasing prevalence of sexually transmitted diseases, delayed child bearing, reversal operations for previous tubal sterilization procedures, and use of assisted reproductive technologies are also contributors.<sup>1</sup> According to its localization an ectopic pregnancy is classified as interstitial (2.5%), isthmic (12.0%), ampullary (70.0%), fimbrial (11.1%), ovarian (3.2%), or abdominal (1.3%).<sup>2</sup> Unusual sites of implantations such as cervix, peritoneum and uterine cor-

nu are reported increasingly.<sup>3,4</sup> Laparoscopy is the choice of surgical approach in the surgical management of ectopic pregnancy.<sup>5</sup>

The case presented by the authors is a rare form of ectopic pregnancy which is developed in the remnant uterine tube in a patient with previous unilateral salpingo-oophorectomy. The patient is treated by a laparoscopic approach.

## CASE REPORT

In this report authors present a case with a spontaneous ectopic pregnancy developed in the remnant uterine tube of a woman who had a history of previous right salpingo-oophorectomy. The patient was a 36 year old woman in her 5<sup>th</sup> pregnancy. She had 3 previous deliveries and 1 abortion. At the time of admittance her sole complaint was an abnormal vaginal bleeding. Routine pelvic examination revealed normal external genitalia, cervix and uterus. Left adnex was normal while the right was nonpalpable. There was no rebound or guarding. Her vital signs were normal and stable. Transvaginal sonography revealed a 37 x 33 mm sized gestational sac in the right uterine cornu with an 11 mm CRL embryo with no detectable cardiac activity (Figure 1). The endometrium lining the 'empty' endometrial cavity was linear. Left uterine tube was in the form of hydrosalpinx and ovary was normal. Her complete blood count was normal. The serum level for  $\beta$ -hCG was 486.6 IU/mL. After briefing the patient for possible surgical procedures, a laparoscopic surgery was conducted under general anesthesia. Open laparoscopy was preferred due to possible adhesions caused by the previous surgery. After achieving pneumoperitoneum the abdominal cavity was examined by laparoscopy. A hydrosalpinx was observed in the left uterine tube and ovary was normal on the left side. The right ovary and tube was not observed due to previous surgery. At the cornual part of the resected side there was a hemorrhagic small remnant of the uterine tube. The ectopic pregnancy was disclosed in this remnant tissue (Figure 2). An adhesion between the descending colon and the remnant tube containing the ectopic pregnancy was dissected with the assistance of a general surgeon. Resection of the right

uterine cornu including the remnant tube was performed. Left uterine tube was removed. After adequate hemostasis pelvic cavity was irrigated with lactated Ringer's solution. Her postoperative course was problem free. Pathologic examination documented an ectopic pregnancy developed in the remnant part of the uterine tube which was partially removed at the time of the first operation.

## DISCUSSION

Ectopic pregnancy presents a major health problem for women of childbearing age. As the consequence of increased prevalence in pelvic surgeries or pelvic inflammatory disease, and widespread treatment with assisted reproductive technologies, the incidence of ectopic pregnancies has greatly increased during the past two decades, and it is now estimated to occur in 2 % of all pregnancies.<sup>6</sup> As a result, reports dealing with the occurrence of rare site of ectopic pregnancy have increased.<sup>3</sup> Approximately 92% of ectopic pregnancies occur in the ampullary portions of the Fallopian tube and approximately 2.5% occur as interstitial/cornual ectopic pregnancy. The rare remaining locations include the cervix, ovary and peritoneum. The search conducted by the authors in MEDLINE and PubMed showed only a small number of cases of ectopic pregnancy developed in the remnant uterine tube following a previous salpingectomy. In such cases the possible explanations for pathophysiology are; fertilization of the ovum in the contralateral tube and implantation in the cornual area after transuterine transport, or fertilization in the contralateral uterine tube or peritoneal area and implantation at the cornual area of the uterus without a transport along the uterine cavity. The number of such cases is very small. In a study the median length of the remnant Fallopian tube was found to be 12 mm (range 6-15 mm) after bilateral salpingo-oophorectomy.<sup>7</sup> It is not clear we can prevent all the ectopic pregnancies in the remnant uterine tubes but every surgeon performing salpingectomy should take measures to prevent such abnormal implantations in the future. In the case presented here, a complete resection of the uterine tube and careful correction of the cornual area in



FIGURE 1: Ultrasonographic view of ectopic pregnancy.



FIGURE 2: Laparoscopic view of ectopic pregnancy material.

the previous operation could theoretically prevent the development of the ectopic pregnancy. However, spontaneous occurrence of interstitial/cornual pregnancy after ipsilateral salpingectomy was reported.<sup>4</sup> Thus, even if nearly complete resection of the uterine tube was achieved, avoiding the occurrence of ectopic pregnancy in the remnant portion of the tube after ipsilateral salpingectomy/salpingo-oophorectomy may be difficult. In this case, di-

agnosis of ectopic pregnancy in the remnant tube following the previous salpingo-oophorectomy was made after a careful evaluation of the history, medical records, laboratory test results and sonographic findings. In the light of this case the authors recommend consideration of an ectopic pregnancy in the remnant uterine tube in patients who has a history of previous salpingectomy/salpingo-oophorectomy.

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