ECTOPIC PREGNANCY AS A COMPLICATION OF ASSISTED REPRODUCTIVE TECHNIQUES FOLLOWING BILATERAL SALPHINGECTOMIES

BİLATERAL SALPENJEKTOMİ SONRASI UYGULANAN YARDIMLA ÜREME TEKNİKLERİNİN BİR KOMPLİKASYONU OLARAK OLUŞAN EKTOPIK GEBELİK OLGUSU

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ABSTRACT

Ectopic pregnancy continues to be one of the important reasons for maternal mortality. With the widespread and frequent use of Assisted Reproductive Techniques (ART), the frequency of abnormally located pregnancies also rises. In this article, we presented a case of an ectopic pregnancy occurring in the right tubal stump after an intracytoplasmic sperm injection – embryo transfer performed on a 39 year-old patient with secondary infertility and bilateral salpingectomy. Although a bilateral salpingectomy was performed in IVF cycles for an early diagnosis in order to decrease maternal morbidity and mortality, an ectopic pregnancy in the stump should be definitely taken into consideration in cases where no intrauterine pregnancy is observed.

Key Words: Ectopic pregnancy; Bilateral salpingectomy; Assisted Reproductive Techniques (ART)

ÖZET


Maternal morbidite ve mortaliteyi azaltacak amacıyla her iki IVF sikluslarında bilateral salpencjektomi yapılmış olısa da intruterin gebelik izlenmedi durumlarla ayrıştırımda mutlaka ektopik gebelik düşünülmelidir.

Anahtar Sözcükler: Ektopik gebelik; Bilateral salpingectomy; Yardımlı üreme teknipleri(YÜT)

INTRODUCTION

Ectopic pregnancy is still one of the important causes of maternal mortality(1). With the widespread and frequent use of Assisted Reproductive Techniques (ART), the frequency of abnormally located pregnancies also rises (2). Though rare for patients with bilateral salpingectomy, there are reports of interstitial (3), ovarian (4), retroperitoneal (5) and subpancreatic (6) pregnancies.

A case of ectopic pregnancy, occurring in the tubal stump following the ART performed on the patient who underwent bilateral salpingectomy in our hospital is presented here in light of relevant literature.

CASE

A 39-year-old woman, had been married for 6 years, gravidity 3, parity 1, had previously one spontaneous abortion. At the end of a year she did not conceive and she applied to our infertility outpatient clinic. After general examination she underwent routine infertlity tests including ovarian reserve test, spermogram and sperm morphology and hysterosalpingography(HSG). HSG revealed unilateral hydrosalpinx.
In 2012, due to right tubal ectopic pregnancy and left hydrosalpinx, a laparoscopic bilateral salpingectomy was performed on the patient. The pathological findings revealed trophoblastic cells compatible with tubal pregnancy in the right tube and chronic salpingitis in the left tube.

After failure of the first attempt, she conceived after the second intracytoplasmic sperm injection–embryo transfer (ICSI-ET) in 2014, however pregnancy was terminated at 28 th weeks of gestation as a result of spontaneous contractions and cervical dilatation. On the seventh day of delivery, infant died as a result of acute respiratory distress syndrome.

In 2015, a third ICSI-ET was performed and on the third day, two embryos were transferred. The following results were observed: on the 14th day of embryo transfer Beta hCG 72 IU/ml, 17. day 253 IU/ml, 19.day 633 IU/ml, 25. day 3879 IU/ml. She admitted to our emergency service complaining of stomachache at the 28th day of embryo transfer. We obtained normal vital findings, beta hCG level 8543 IU/ml,12 mm thickness of endometrium, no gestational sac in the uterine cavity, normal ovaries and mass including hyper-hyoechogenic regions, with a size of 20x12 mm at the right adnexial site in the transvaginal-ultrasonography.

Results of our clinical examinations and tests indicated an ectopic pregnancy located on the right remnant tube and she underwent laparoscopic surgery. During surgical exploration an ectopic pregnancy on the right proximal stump was observed at a size of 20x20 mm. It was then resected and an endometrial curettage was performed. Histopathological examination reported secretory phase in endometrial tissue and gestational material located in the right remnant tube.

**DISCUSSION**

Ectopic pregnancy makes up 1.7%-2% of all pregnancies obtained through ART (7). In addition, there are some publications indicating that the rates of ectopic pregnancy through ART are higher than spontaneous pregnancies (8).

Even though ectopic pregnancy is often seen as a complication of ART, it is rarely observed in the proximal tubal stump among patients who underwent bilateral salpingectomy. Po-Chun et al reported its incidence as 0.4% (9).

The rates of pregnancy through ART in cases with hydrosalpinx is low, bilateral salpingectomy is frequently performed to increase pregnancy rates (10). This approach leads to one extra surgical intervention in these patients just before ART(11).

The mechanism of post-ART ectopic pregnancies can originate from the direct transfer of embryo to the tube or migration of the embryo from the endometrial cavity to the tube. The embryo transfer technique (deep fundal transfer), use of a transfer medium with a high volume, multiple embryo transfer, frozen embryo transfer, artificial insemination can all increase the possibility of ectopic pregnancies (8). As in our case, two embryos were easily transferred into the fundus by a soft-catheter under the guidance of ultrasonography. Despite bilateral salpingectomy, the nature of ectopic pregnancies are yet not exactly known; moreover, appropriate methods and surgical techniques that can decrease the risk of ectopic pregnancies, such as the correct and proper cauterization of the tubal stump, needs further investigation (3).

Researchers have not yet demonstrated whether it is possible to prevent this kind of ectopic pregnancy or not. If a complete tubal resection is performed during the first salpingectomy, an ectopic pregnancy on the isthmic part of the remnant tube would be theoretically blocked. However, there are some reports of a spontaneous formation of interstitial/cornual pregnancy following the ipsilateral salpingectomy (12,13). Therefore, even if the tube is completely resected, it can be difficult to prevent the development of ectopic pregnancy in the remnant tube after the ipsilateral salpingectomy (9).

Agarwal et al reported cases of corneal pregnancy in seven patients who underwent a salpingectomy before IVF-ET (14). Po-Chun et al reported six cases of tubal stump pregnancy, four of which occurred after ART (9).

The use of ART has led to a considerable increase in tubal stump pregnancies. Against the risk of rupture in the early phase, a rigorous transvaginal ultrasonographic evaluation should be made especially for patients who undergo a salpingectomy, whose Bhcg values are lower than normal or do not exhibit a regular increase (9).

It should be kept in mind that the previous surgery of bilateral salpingectomy can be associated with a missed diagnosis of ectopic pregnancy which may result in a life threatening intraabdomial bleeding (15).

Our case report shows that despite history of bilateral salpingectomy, an ectopic pregnancy can be encountered after ART and present with life threatening results. Clinicans should always be suspicious for the rare conditions to save life.

**REFERENCES**


