

Bilateral Tubal Ectopic Pregnancy After Assisted Reproduction Technique: A Case Report

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Ectopic pregnancy is still an important cause of maternal mortality. Bilateral tubal ectopic pregnancy is very rare, and is usually the result of an assisted reproduction technique. We describe a case of early bilateral tubal pregnancy diagnosed by transvaginal ultrasonography after intracytoplasmic sperm injection (ICSI) and embryo transfer (ET).

Key Words: Ectopic pregnancy, IVF

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Case Report

A woman aged 33 was admitted after experiencing severe abdominal pain. She had been amenorrhoeic for six weeks and a urine pregnancy test was positive. There were no risk factors for ectopic pregnancy in her medical history. A sudden increase in pain had prompted her self - referral.

The patient undergo an IVF-ET cycle because oligospermy. Stimulation involved initial down-regulation with 50 µg/d s.c. of a GnRH agonist and 250 IU rFSH (Gonal F; Serono Laboratories) on cycle days 3-13. On the 12th day of the cycle, her plasma E₂ level was 1,250 pg/mL. On cycle day 12, 10.000 U of hCG (Profasi; Steris Labs for Serono, Phoenix, AZ) was administered. Thirty-six hours later, recovery was performed by transvaginal ultrasonography. Five oocytes were recovered. Both of these oocytes successfully fertilized and cleaved. The three resulting embryos were transferred transcervically into the uterus without difficulty on day 3 after insemination. The luteal phase was supported with 600 mg of P_{tb} per oral.

She first presented to the emergency department 55 days after ET with severe lower abdominal pain, cramping, and vaginal bleeding. She had had a 2-day episode of vaginal bleeding with clots 1 week before presentation. On admission, she was diaphoretic with a blood pressure of 90/45 mm Hg, a heart rate of 90 beats per minute, and bilateral lower abdominal tenderness with rebound and guarding. The hCG level was 2.100 mIU/mL. An ultrasound revealed 4,8×3,2-cm right and

3,7×3,9 cm left adnexal mass suggestive of an ectopic pregnancy (EP) and free fluid. No intrauterine pregnancy was visualized.

She was mildly tender in the right and left iliac fossa but on pelvic examination there was no cervical excitation or adnexal tenderness. At diagnostic laparoscopy, extensive blood was seen within the peritoneal cavity. Neither fallopian tube was clearly visible so a ruptured ectopic pregnancy was diagnosed. laparoscopy, disclosed a large ruptured ectopic pregnancy with destruction of the left and right fallopian tube. There also appeared to be a small unruptured ectopic pregnancy in the right fallopian tube. Left and right salpingectomy were performed and histological examination confirmed synchronous bilateral ectopic pregnancy. She was discharged without incident the next morning.

Discussion

The incidence of ectopic pregnancy has tripled in the Western World over the past two decades, with a plateauing for the last 10 years as recently shown in the USA. In France, it has been estimated to 2% of births and unusual forms of ectopic pregnancy such as simultaneous bilateral tubal implantation are becoming more frequent in particular after in vitro fertilization and embryo transfer (IVF-ET).¹

Whereas it is well accepted that transvaginal sonography changed the diagnostic algorithm of ectopic pregnancy with an earlier diagnosis,² its use for the follow-up of medically treated EP such as local or intramuscular MTX injection is of no benefit in the management of these patients, because the ectopic mass usually increased in size with an amount of fluid in the Douglas cul-de-sac increasing.³ Therefore, ultrasound is performed only in cases of abnormal clinical signs (pelvic pain) or hCG clearance alterations with increasing or plateauing levels. However, a careful inspection of the controlateral tube may be a very interesting indication compared to other tools such as laparoscopy to avoid complications such as secondary tubal rupture.

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Furthermore, an early diagnosis of bilateral ectopic pregnancy after embryo transfer may improve the opportunity to perform a medical treatment because of uncomplicated clinical presentation. Indeed, several authors demonstrated that conservative treatment such as intramuscular MTX injection permits a similar fertility rate compared to surgical treatment.⁴ Our policy of EP treatment is to perform a conservative treatment with in-situ MTX treatment when it is possible because we are convinced that such a treatment is economically more interesting with a lower cost and a similar rate of fertility. Such a policy, in our view, should similarly be applied to EP after assisted reproductive technology such as IVF.

Comprehensive clinical guidelines for the treatment of ectopic pregnancy have been published by the Royal College of Obstetricians and Gynaecologists.⁵ Because of its rarity, synchronous ectopic pregnancy is not covered, but the principles of treatment can still be applied. Laparoscopic surgical treatment is preferred to open procedures, because the patient recovers more quickly and subsequent rates of intrauterine and ectopic pregnancy are similar.⁶

There are several reports in the literature suggesting that GnRH analogue use may be linked to a higher rate of ectopic pregnancy in the IVF population.⁷ If the patient has previous pelvic inflammatory disease, there will be an obvious increase in ectopic pregnancies.⁸ Sometimes, minor subclinical tubal pathology may also be a risk factor.⁹ It is now recommended that the number of transferred embryos should not exceed three, especially in women with history of tubal pathology. However, several ART centres have reported success after GIFT in case of endometriosis and even peritubal adhesion.¹⁰ GIFT has recently been extended to patients with tubal pathology, thus again increasing the risk of extrauterine implantation.¹¹

In conclusion, the purpose of this case report is not to describe the first medical treatment of bilateral ectopic pregnancy, but to demonstrate the importance in assisted medical procedures to perform routinely a second sonographic control after the first pregnancy localisation, either intrauterine or ectopic.

Yardımcı Üreme Tekniği ile İki Taraflı Dış Gebelik: Olgu Sunumu

33 yaşındaki bayan hastaya oligospermi endikasyonu ile IVF uygulandı. Yapılan uygulama sonrası altı hafta sonra şiddetli karın ağrısı ve vajinal kanamayla başvuran hasta değerlendiril-

di. Laparoskopisi ile batına girildiğinde fazla miktarda serbest kan ve iki taraflı rüptüre olmuş tubal dış gebelik görüldü. Hastaya iki taraflı salpenjektomi yapılarak işleme son verildi.

Anahtar Kelimeler: Dış gebelik, IVF

References

1. Pascal Mock, François Olivennes, Severin Doumerc, René Frydman and Hervé Fernandez . Simultaneous bilateral tubal pregnancy after intracytoplasmic sperm injection treated by conservative medical treatment Interest of sonographic follow-up. *Eur Obstet Gynecol Rep* 94(1); 2001:155-7
2. I.E. Timor-Tritsch and S. Rottem, Transvaginal sonographic study of the fallopian tube. *Obstet Gynecol* 70 (1987), pp. 424-8.
3. D.L. Brown, R.E. Felker, T.G. Stovall et al., Serial endovaginal sonography of ectopic pregnancies treated with methotrexate. *Obstet Gynecol* 77 (1991), pp. 406-409.
4. P.J. Hajenius et al., Randomised trial of systemic methotrexate versus laparoscopic salpingostomy in tubal pregnancy. *Lancet* 350 (1997), pp. 774-9.
5. Kelly AJ, Sowter MC, Trinder J. *The Management of Tubal Pregnancy*. London: RCOG Press, 2004.
6. Hajenius PJ, Mol BWJ, Bossuyt PMM, Ankum WM, Van der Veen F. Interventions for tubal ectopic pregnancy. *Cochrane Database of Systematic Reviews* 2000, Issue 1.
7. Klipstein, S. and Oskowitz, S.P. (2000) Bilateral ectopic pregnancy after transfer of two embryos. *Fertil. Steril.*, 74, 887-888.
8. Marcus, S.F., Macnamee, M.C. and Brinsden, P.R. (1995) Heterotopic pregnancies after in-vitro fertilization and embryo transfer. *Hum. Reprod.*, 10, 1232-6.
9. Li, H.P., Balmaceda, J.P. and Zouves, C. (1992) Heterotopic pregnancy associated with gamete intra-Fallopian transfer. *Hum. Reprod.*, 7, 131-5.
10. Novy, M.J., Hickok, L.R., Patton, P.E., Craemer, M.L. and Wolf, D.P. (1991) Pregnancy after fimbriectomy reversal: results of microsurgery, augmented by gamete intrafallopian tube transfer and embryo transfer. *Fertil. Steril.*, 56, 1166-8.
11. Strowitzki, T., Korell, M.M., Seehaus, D. and Hepp, H. (1993) Combined intra-uterine and extra-uterine pregnancy in the contralateral tube after gamete intra-Fallopian transfer. *Hum. Reprod.*, 12, 2231-3.