

# Ureteric Injury During Transvaginal Ultrasound Guided Oocyte Retrieval

Angelos G. Vilos, MD,<sup>1,2</sup> Valter Feyles, MD, PhD,<sup>1,2</sup> George A. Vilos, MD,<sup>1-3</sup>  
Ayman Oraif, MD,<sup>1,2</sup> Hanin Abdul-Jabbar, MD,<sup>1,2</sup> Nicholas Power, MD<sup>4</sup>

<sup>1</sup>Department of Obstetrics and Gynecology, Western University, London ON

<sup>2</sup>The Fertility Clinic, London Health Sciences Centre, London ON

<sup>3</sup>St. Joseph's Health Centre, London ON

<sup>4</sup>Department of Urology, Western University, London ON

## Abstract

**Background:** Transvaginal ultrasound guided oocyte retrieval during in vitro fertilization is performed routinely around the world and has reduced the occurrence of intra-abdominal injury considerably over laparoscopic procedures. Despite this, injuries do occur.

**Case:** We report a case of a 37-year-old patient who underwent IVF and encountered a ureteric injury during oocyte retrieval, which was recognized early and treated with ureteral stents with full resolution. During a subsequent IVF cycle, stenting of the ureters allowed better visualization, resulting in an uneventful retrieval and subsequent pregnancy.

**Conclusion:** Ureteric injury can occur during transvaginal ultrasound guided egg retrieval. Prompt recognition is vital to successful treatment. Stenting of the ureters is the most common therapeutic modality and can be used in subsequent retrievals to identify the ureters.

## Résumé

**Contexte :** Dans le cadre de la fécondation *in vitro*, la récupération d'ovocytes guidée par échographie transvaginale constitue une intervention qui est régulièrement menée partout dans le monde et qui a permis d'atténuer le taux de lésion intra-abdominale de façon considérable, par comparaison avec le recours à des interventions laparoscopiques. Toutefois, ces lésions n'ont pas été éradiquées pour autant.

**Cas :** Nous signalons le cas d'une patiente de 37 ans qui a eu recours à la FIV et qui a subi une lésion urétérale au cours de la récupération des ovocytes; la présence de cette lésion a été constatée tôt et a fait l'objet d'une prise en charge (au moyen d'endoprothèses urétérales) qui s'est soldée en une résolution complète. Dans le cadre d'un cycle de FIV subséquent, la

présence d'endoprothèses dans les uretères a permis une meilleure visualisation, ce qui a mené à la réussite de la récupération d'ovocytes et de la grossesse subséquente.

**Conclusion :** Des lésions urétérales peuvent survenir dans le cadre de la récupération d'ovocytes guidée par échographie transvaginale. La rapidité de l'identification de ces lésions est d'une importance cruciale pour la réussite du traitement. La pose d'endoprothèses dans les uretères constitue la modalité thérapeutique la plus courante et peut être utilisée pour mieux identifier les uretères dans le cadre des interventions subséquentes de récupération d'ovocytes.

J Obstet Gynaecol Can 2015;37(1):52-55

## INTRODUCTION

In vitro fertilization and embryo transfer has been established as an integral part of assisted reproductive technology worldwide<sup>1</sup>. IVF requires several steps in sequence, including stimulation of ovarian follicles, ultrasound-guided transvaginal oocyte retrieval, in vitro fertilization of the oocytes, and transfer of one or more embryos into the uterine cavity. Complications can occur during any of these steps and may rarely result in serious sequelae.

We describe here a case of a 37-year-old woman who had a ureteric injury during ultrasound-guided oocyte retrieval which was recognized early (< 24 hours) and treated with ureteral stenting until fully resolved.

## THE CASE

A 37-year-old woman, gravida 1 para 0, presented with infertility. She had undergone three unsuccessful intrauterine inseminations and three cycles of IVF at

**Key Words:** Transvaginal oocyte retrieval, in vitro fertilization, embryo transfer, ureteral injury, uretero-vaginal fistula

Competing Interests: None declared.

Received on January 28, 2014

Accepted on June 6, 2014

another centre; in her last IVF cycle she had conceived after single embryo transfer but miscarried at six weeks' gestation. She had no cryopreserved embryos from any of these cycles.

Her medical history included obesity (BMI 42 kg/m<sup>2</sup>) and hyperlipidemia, and she was a carrier of factor V Leiden mutation without any history of thrombosis. She had regular menstrual cycles and no indication of endocrinopathy. She had had one previous therapeutic abortion. Her cycle day three hormone profile was normal (including serum FSH < 10 IU/L), and her level of anti-müllerian hormone was normal at 19.7 pmol/L, suggesting adequate ovarian reserve. Sonohysterography showed an essentially normal uterine cavity with an arcuate fundus.

Initial discussion with the patient focused on the guarded prognosis in a fourth IVF treatment cycle and consideration of use of donor oocytes. She elected to proceed with IVF treatment using her own oocytes, and she declined further hysteroscopic evaluation before treatment.

### First IVF Treatment Cycle

Follicular stimulation was undertaken using recombinant FSH (Gonal F, EMD Serono Canada, Mississauga, ON) 150 IU daily plus injectable menotropin (Menopur, Ferring Canada Inc., North York, ON) 75 IU daily beginning on the third day of the cycle. Daily injections of the GnRH antagonist ganirelix (Orgalutran, Merck Canada, Kirkland, ON) 250 µg began on the fifth day of follicular stimulation. On the tenth day of stimulation, ovulation was triggered with injection of human chorionic gonadotropin 5000 IU (Pregnyl, Merck Canada, Kirkland, ON). Intracytoplasmic sperm injection was judged to be not required.

Oocyte retrieval, using the standard transvaginal ultrasound-guided approach, was performed by an experienced subspecialist in reproductive endocrinology and infertility. The patient was prepared and draped in the dorsolithotomy position, and aspiration of ovarian follicles was carried out using a 16-gauge oocyte aspiration needle (Cook Medical Inc., Bloomington, IN) mounted on a Ultrasonix transvaginal probe (Analogic Ultrasound Canada, Richmond, BC) with needle guide and connected to a Cook Aspiration Unit (Cook Medical Inc., Bloomington, IN). The ovaries were positioned relatively high and lateral in the pelvis; however, with proper adjustments of the transvaginal ultrasound probe, it was possible to aspirate the intermediate and mature size follicles from both ovaries. Hemostasis was satisfactory post-procedure, and the patient tolerated the aspiration with routine conscious sedation.

Within 12 hours of the oocyte retrieval, the patient noted a watery vaginal discharge. A CT scan with delayed contrast identified a right ureteric injury, 1 cm from the vesico-ureteral junction. Following urologic consultation, a ureteral stent was placed using cystoscopy and remained in situ for three weeks. The patient subsequently had the stent removed and recovered without further incident.

Although eight oocytes were retrieved, none of them fertilized in vitro despite a normal sperm concentration and normal motility, and favourable residual motility observed 24 hours after oocyte retrieval.

### Second IVF Treatment Cycle

The patient requested a second IVF treatment cycle. After interdisciplinary consultation, it was decided that laparoscopic and hysteroscopic evaluation would be appropriate before additional IVF cycles were undertaken.

Hysteroscopic evaluation was essentially normal. Laparoscopy revealed stage II endometriosis involving mostly the left side of the pelvis. Adhesions were noted involving the recto-sigmoid and the left ovary and fallopian tube. Both ovaries were pulled towards the pelvic brim by endometriotic scarring on the lateral pelvic sidewalls. All adhesions and endometriotic implants in the cul-de-sac and all visible endometriotic lesions within the pelvis were excised or vaporized with the CO<sub>2</sub> laser. The patient recovered without incident.

One week before her IVF treatment cycle, the patient had bilateral ureteric stents placed by the urology team as a precautionary measure. An ultrasound examination on the third day of her menstrual cycle clearly showed the stents and identified the vesico-ureteral junction. The patient began a stimulation protocol of recombinant FSH (Gonal-F, EMD Serono Canada, Mississauga, ON) 300 IU daily and recombinant LH (Luveris, EMD Serono Canada, Mississauga, ON) 150 IU daily. Daily injections of the GnRH antagonist ganirelix (Orgalutran, Merck Canada, Kirkland, ON) began on the fifth day of stimulation, as in her first treatment cycle. Using a transvaginal approach that was identical to the approach for her previous retrieval, four eggs were retrieved, all of which fertilized after intracytoplasmic sperm injection. The ureteral stents were clearly visible on ultrasound, ensuring that both ureters and vesico-ureteral junctions could be avoided. Two of the cultured embryos were judged to be of good quality on the third day of culture, and both of these embryos were transferred. The ureteral stents were removed at 48 hours post-egg retrieval. The patient conceived a singleton intrauterine gestation but miscarried at eight weeks' gestation.

Download English Version:

<https://daneshyari.com/en/article/3958712>

Download Persian Version:

<https://daneshyari.com/article/3958712>

[Daneshyari.com](https://daneshyari.com)