

ANDROLOGY

Emergency Sperm Extraction for Transient Erectile Dysfunction Prior to Assisted Conception

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Submitted: July 1, 2000

Accepted: July 5, 2000

Purpose: During assisted conception treatment the male partner is under stress and consequently can fail to produce semen sample prior to egg collection. Failure to produce spermatozoa at a given time could lead to cancellation of the procedure.

Methods: We report the use of emergency percutaneous epididymal sperm aspiration (PESA) for temporary erectile dysfunction in a couple undergoing in vitro fertilization treatment. In the last 2 years, we saw three men who failed to produce a semen sample on the day of their partners' egg collection procedure.

Results: In the first case the male partner failed to produce semen after egg collection and the cycle was canceled. This clinical scenario was likely to recur and one of the options was to consider PESA. In the second case the male partner was counseled about the availability of PESA but he managed to produce spermatozoa at home. The third patient was unable to produce a semen sample despite being provided audiovisual support and being allowed to go home. Five hours after the egg collection, emergency PESA was performed after appropriate counseling. The procedure yielded motile spermatozoa which were used for intracytoplasmic sperm injection which resulted in successful fertilization, embryo transfer, and pregnancy.

Conclusions: This case emphasizes that surgical procedures,

such as PESA, TESA, and TESE, are useful alternatives but should be the last option to obtain sperm for ART. Other nonsurgical procedures, such as audiovisual aids, producing sperm at home, and the use of sildenafil citrate (Viagra) must be offered first to men with temporary erectile dysfunction during ART treatment.

KEY WORDS: Percutaneous epididymal sperm aspiration (PESA); testicular sperm aspiration (TESA); testicular sperm extraction (TESE); temporary erectile dysfunction (TED); assisted reproductive technology (ART).

INTRODUCTION

In assisted conception, the role of the male partner, besides being supportive to the female partner, is to produce spermatozoa prior to egg collection. However, the psychological pressure to perform on demand is stressful, leading to ejaculatory failure (Tur-Kaspa *et al.*, 1999). In most cases spontaneous erection is possible with audiovisual aids. In established cases of erectile dysfunction, procedures such as electroejaculation and epididymal or vasal sperm aspiration have been successfully implemented (Hovav *et al.*, 1996; Vanderschueren *et al.*, 1998). Sildenafil citrate (Viagra) has recently been reported for treating patients with transient erectile dysfunction with no established organic lesion (Tur-Kaspa *et al.*, 1999; Boolell *et al.*, 1996). In selected cases vigorous prostatic massage is an effective method of sperm collection (Fahmy *et al.*, 1999). We describe the clinical course of a couple whose male partner was managed with emergency percutaneous epididymal

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sperm aspiration (PESA), which resulted in a successful pregnancy. We believe that PESA is a useful alternative in cases with temporary erectile dysfunction.

CASE REPORT

A couple with primary infertility of 3 years' duration was referred for assisted conception treatment. The female partner was known to have polycystic ovarian syndrome and had failed to respond to gonadotropins for ovulation induction on two occasions. The male partner had a normal semen analysis and there was no history of erectile dysfunction. However, on the day of his wife's egg collection he suffered from erectile dysfunction. The oocytes were collected at 1000 hr. He was offered audiovisual support and allowed to go home to produce sperm. He was unable to achieve an erection and produce a semen sample. Following counseling at 1500 hr it was decided to proceed with an emergency PESA. The procedure was performed with ilioinguinal, genitofemoral, and pudendal (scrotal branch) nerve block with lignocaine and marcaine. Multiple aspirates showed normal-looking motile spermatozoa from epididymis. A total of 11 oocytes was collected, with 8 in metaphase II, allowing ICSI to be performed on them. Six of the oocytes fertilized and two embryos (four-cell, grade 2) were transferred 48 hr following egg collection.

Luteal support was provided with Cyclogest, 400-mg (Shire, Andover, UK) twice-daily suppositories. Two weeks later the pregnancy was confirmed and an ultrasound examination revealed twin intrauterine gestation.

DISCUSSION

Transient erectile dysfunction on the day of oocyte collection has been reported (Tur-Kaspa *et al.*, 1999). Failure to produce a semen sample may lead to cancellation of the treatment cycle. Sometimes this may force the couple to use donor sperm without appropriate counseling. This might have an adverse psychological effect on the couple, especially on the male partner, who feels responsible for the failure. In such cases it is an advantage for the couple to freeze sper-

matozoa as a backup for the next cycle. Audiovisual support and producing sperm at home instead of at the ART center may be useful in some cases and should be offered as the first option in men with temporary erectile dysfunction. Sildenafil has been used successfully for temporary erectile dysfunction during treatment for assisted conception (Tur-Kaspa *et al.*, 1999). When nonsurgical methods have failed, PESA/TESA can be used as an emergency procedure. The utility of PESA in situations of unexpected obstructive azoospermia has been documented (Menru *et al.*, 1997). In such cases epididymii are unobstructed and aspiration may not always be successful. Although the use of pharmacological agents such as sildenafil is an alternative treatment for temporary erectile dysfunction (Tur-Kaspa *et al.*, 1999), it is more appropriate for known cases. PESA/TESA is an alternative method for rescuing the cycle and should be available as an emergency procedure in all assisted conception units. In conclusion, surgical procedures such as PESA/TESA/TESE are useful alternatives but should be the last option to obtain sperm when nonsurgical methods such as audiovisual support, producing sperm at home, and Viagra have been offered first to men with temporary erectile dysfunction during ART treatment.

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