

BRIEF COMMUNICATION

A UNIQUE CASE EXEMPLIFYING THE USE OF IVF FOR UNEXPLAINED INFERTILITY

JH Check^{1,2}, A. Nazari^{1,2}, AF Baker², G Goldsmith²

¹University of Medicine/Dentistry of New Jersey, Robert Wood Johnson Medical School at Camden, Cooper Hospital/University Medical Center, Department of Obstetrics & Gynecology, Camden, NJ; ²Endocrine Histology Associates, P.C., Division of IVF, Melrose Park, PA USA

ABSTRACT: IVF/ET may be an effective therapy for unexplained infertility. However, perhaps pregnancies might be achieved merely by hyperstimulation with hMG. A case is presented of two consecutive pregnancies by IVF-ET in a women who failed to conceive following 49 hMG cycles.

A study by Navot et al (1988) concluded that patients with unexplained infertility (UI) constitute a favorable group for IVF/ET. In another study of patients with UI, the conception rate with empiric hMG compared favorably with the rate after IVF-ET (Welner et al, 1988). At the present time, we are unaware of any reports regarding the success of IVF-ET in patients with UI who failed to conceive following multiple cycles of hMG therapy. We present a case that convincingly demonstrates the efficacy of IVF/ET for women with unexplained infertility.

MATERIALS / METHODS. An anovulatory woman with eugonadotropic amenorrhea provided multiple treatment cycles with all apparent infertility factors corrected. She then had two attempts at IVF-ET. Serum LH, FSH, prolactin, thyroxine, and TSH levels were obtained. Ovarian stimulation included Clomiphene citrate therapy 100 mg days 5 to 9; bromocriptine 2.5 mg twice daily; variable doses of hMG and 10,000 units hCG.

Semen analysis was performed on the husband using computer assisted analysis (Cryo Resources, New York). Post-coital tests were performed 8-14 h after intercourse extracting the mucus with a tuberculin syringe. Endometrial biopsies were performed in the late luteal phase using Pipell endometrial suction curette. Uterine/tubal factors were evaluated by hysterosalpingography/laparoscopy.

Transabdominal/transvaginal sonography using an ATL Ultramark unit with a 5 mhz transducer was employed to monitor follicular size. Follicular function was further evaluated by measuring serum E₂, P, and LH levels. hCG was given when there was at least one dominant follicle with an 18 mm mean diameter associated with a serum E₂ of at least 300 pg/ml and the serum P still under 2 ng/ml. Release of the oocytes was monitored by repeated ultrasonography 2-3 days following hCG.

Leuprolide acetate 1 mg subcutaneously was used daily from the mid-luteal phase for at least 10 days until serum E₂ and P were suppressed; the leuprolide acetate was reduced to 0.5 mg daily and hMG 300 units was given for 4 days then reduced to 225 units for 2 days then 150 units daily. Transvaginal aspiration of oocytes using ultrasound guidance was employed. Embryo transfer occurred approximately 2 days later.

RESULTS / DISCUSSION: The patient was treated over a 7 year period from age 35-42. During this time span she received 49 cycles of hMG where mature follicles were established associated with excellent post-coital results, release of the oocytes, and several biopsies demonstrating an in-phase endometrium. However, a pregnancy was never achieved. After two IVF cycles, she conceived in both IVF-ET cycles (Table 1). The first pregnancy ended in a spontaneous abortion with the highest hCG level attained of 787 uIU/ml. The second pregnancy resulted in the delivery of healthy/normal female.

Table 1. Summary of IVF cycles

IVF cycle	Oocytes retrieved	No. fertilized	No. embryos transferred
IVF I	6	5	4
IVF II	2	2	2

In her first cycle one fertilized oocyte was polyspermic; therefore only 4 embryos were transferred.

IVF is frequently suggested after 8 cycles of all factors seemingly corrected. However, it is still not uncommon for some women to conceive on their tenth or eleventh cycle of hMG. This case with both IVF attempts resulting in pregnancies despite previous failures in 49 hMG cycles of therapy, convincingly demonstrates that IVF can be effective for some cases of UI. Nevertheless, IVF or GIFT is probably used prematurely in many cases. It thus

seems reasonable to first attempt less invasive superovulatory techniques prior to IVF for UI.

Navot D, Muasher SJ, Oehninger S, Liu HC, Veeck LL, Kreiner D, Rosenwaks Z (1988). The value of *in vitro* fertilization for the treatment of unexplained infertility. *Fertil Steril* 49:854-857.

Welner S, DeCherney AH, Polan ML (1988). Human menopausal gonadotropins: a justifiable therapy in ovulatory women with long standing idiopathic infertility. *Am J Obstet Gynecol* 158:111-117.