

LETTERS TO THE EDITORS

Semantics and Acronyms in in Vitro Fertilization (IVF)

We were interested in your editorial of December 1986 (1) discussing semantics in the nomenclature of in vitro fertilization (IVF). We support the concept of correct application of terms and understand that language is a dynamic medium where common usage may cause changes in the meanings of some words which may vary considerably from their original definition.

However, we caution against this trend in scientific areas, particularly where a well-defined word such as "zygote" is now being used by some writers to cover all postfertilization embryo states. I refer readers to the early description provided by Professor C. R. Austin (2). This indicates that the term should be reserved for that stage of embryo development which exists after the discrete appearance of two pronuclei and before cleavage; i.e., there is a difference among the pronuclear-stage oocyte, the zygote, and the two-cell and subsequent cleavage stages of embryos. For those who might consider that fewer words are better than more words, I cite the views of Dame Leonie Kramer, Professor of English Literature at the University of Sydney, who feels that the English language can benefit only by expansion rather than by the use of terms which contract it (3). A greater vocabulary means greater thought conceptualization as well as greater descriptive specificity. This view may explain why the English language, which contains a greater number of words than any other in its dictionary, is developing as the preferred language for international conferences in a broad range of scientific and nonscientific fields.

Furthermore, we accept the value of well-chosen acronyms or abbreviations which will find popular use as spoken jargon but are understood to be representative of the fully descriptive title which they represent. It is suggested that such acronyms and abbreviations should be chosen with due consideration for their ease and fluidity of pronunciation. In this context, we find the following particularly useful:

- IVF-ET for in vitro fertilization and uterine embryo transfer (4),
- GIFT for gamete intrafallopian transfer (5),
- PROST for pronuclear-stage tubal transfer (6),
- ZIFT for zygote intrafallopian transfer (7), and
- TEST for tubal embryo-stage transfer (referring to embryos in the premorula cleavage states) (8).

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Establishment of a Successful in Vitro Fertilization (IVF) and Gamete Intrafallopian Transfer (GIFT) Program in Malaysia

In vitro fertilization and embryo transfer (IVF-ET) and gamete intrafallopian transfer (GIFT) programs were started at the Subang Jaya Medical Centre (SJMC) in March 1986. The programs were established by PIVET Laboratory (Malaysia) and conducted by a local team of doctors and laboratory staff. During the initial stages of the program, training and supervision of both clinical and laboratory staff were conducted by senior members of PIVET Infertility Management Services at the PIVET Medical Centre in Perth, Western Australia. This summary reports the results of the initial 12 months of experience with IVF-ET and GIFT procedures in Malaysia, up to the end of March 1987.

Twenty couples had a total of 23 treatment cycles in the IVF-ET program and 42 couples had a total of 53 treatments in the GIFT program. The preliminary investigations were performed according to the protocols of the established PIVET service program (*Med J Aust* 1987;146:657-658) and included couples with tubal disorders, oligospermia, endometriosis, antispermatozoal antibodies, polycystic ovary disease (PCO), and disordered ovulatory cycles and one case of failed AID. Ovarian stimulation was generally by clomiphene citrate with or without added human menopausal gonadotropin (hMG) (Pergonal; Serono, Rome, Italy). Patients identified with high basal luteinizing hormone (LH) or PCO (*Br J Obstet Gynaecol* 1985;92:385-393) were stimulated with a combined pure follicle-stimulating hormone (FSH) (Metrodin; Serono, Rome, Italy) and hMG regimen. Cases were monitored by daily rapid hormonal radioimmunoassays from blood samples collected at 8:00 AM on the eighth day of the cycle (estradiol 17- β , E₂; progesterone, P₄; and LH) and pelvic ultrasound scanning to identify follicle development. Human chorionic gonadotropin (hCG), 10,000 IU, was given as the trigger when the E₂ level was approximately 1500 pmol/liter/follicle >1.5 cm (average of three different transonic diameters). Patients who surged spontaneously were augmented with hCG and collected at an estimated interval of 32 to 36 hr after the onset of the LH surge. The surge onset was estimated according to the level of P₄ rise detected. Oocyte recovery was performed at laparoscopy using the PIVET-AN1 aspiration/flushing needle system, and oocyte recovery was 85% of the follicles entered. For IVF-ET, inseminations were performed 4 hr later with 100,000 prepared motile spermatozoa/ml. The pronuclear stage was identified at 14 to 16 hr and embryo transfer was undertaken at 44 to 48 hr when embryos were noted to be between the two-cell and the eight-cell stage of cleavage. GIFT cases were treated according to the described PIVET protocol (*Fertil Steril* 1987;in press) where a maximum of four oocytes was transferred to the fallopian tubes via Teflon catheter (Cook, Australia) and the spermatozoal numbers are adjusted according to the standard or modified protocols for oligospermics and those with antispermatozoal antibodies.

In IVF, a mean of 5.7 oocytes was recovered per case and the overall fertilization rate was 52%. A total of 51 embryos was replaced during 19 transfers (2.7 per transfer). Four clinical pregnancies were achieved following the transfer of three or four embryos. The pregnancy rate was thus 21.1% per transfer. The first pregnancy was a twin but the patient suffered a placental abruption at 24 weeks, with the intrauterine death of one of the twins. The remaining twin progressed and was delivered at 37 weeks by cesarean section. She was a normal female infant weighing 2.450 kg and was delivered along with her stillborn (fetus papyraceus) sibling.

In the GIFT program the mean number of oocytes collected was 6.7 per laparoscopy and the mean number transferred was 3.7 per GIFT treatment cycle. Fourteen pregnancies occurred (34% per transfer), with nine subsequently proceeding beyond 20 weeks of gestation. The first successful case delivered on 2 June 1987, with normal twin girls weighing 2.11 and 2.09 kg, respectively.