

ized and adjusted according to serum estradiol (E2) levels and endometrial thickness as measured by transvaginal ultrasound. Secretory differentiation of the recipient's endometrium was initiated beginning 1 day after oocyte retrieval from donors. This was achieved with 50 mg/day of progesterone in oil intramuscularly and/or micronized progesterone (Utrogestan) 800 mg/day administered intravaginally.

Donors

Potential donors were infertile patients undergoing in-vitro fertilization-embryo transfer (IVF-ET) treatment. Their identities were unknown to the recipients, and all signed written consent to donate their excess oocytes. All donors received stimulation protocol with GnRH agonist (Buserelin) and purified FSH (Metrodin). In the presence of 2 or more follicles > 18 mm in diameter and serum E2 > 500 pg/mL, 10,000 IU of HCG was administered, and transvaginal oocyte aspiration was performed 34 h later.

Fresh excess oocytes from donors were fertilized by a "swim-up" selected spermatozoa population of the recipient's husband. Embryos, varying from 1 to 6 in number, at the 4-8-cell stage were transferred to the recipient's uterus 48-72 h after insemination. This embryo transfer was performed on day 8 to day 21 of the recipient's cycle. Serum E2 and progesterone (P4) were measured on the day of ET and at weekly intervals thereafter.

Exogenous hormonal support was continued until 2 weeks after ET in failed cases, or up to 15 weeks' ges-

tation in successful pregnancies.

RESULTS

Ten POF women underwent a total of 24 treatment cycles (Table 1). Of these, the 12 pregnancies obtained produced a pregnancy rate of 50% per transfer. Six of these pregnancies were clinical, hence producing a clinical pregnancy rate of 25% per transfer. One of the 6 clinical pregnancies aborted (17%), and 3 (50%) were multiple. Of these 3 multiple pregnancies, 2 were twins, and 1 was triplets (successfully reduced to singleton).

ET was performed on day 8 to day 21 of the cycle. However, successful pregnancies were obtained in cycles with ET performed on days 12, 13, 14, 15, and 18. Implantation did occur as early as day 9, though it failed to reach viability. At or beyond day 20, no viable pregnancy was observed. No pregnancy occurred in cycles in which only 1 embryo was transferred.

Pregnancy outcome analyzed by type of estrogen used is depicted in Table 2. TE2 cycles produced the highest pregnancy rate of (82%, 9/11) followed by E.V. (33%), and premarin (13%). However, no viable pregnancy was noted in cycles utilizing orally administered estrogens. Of the pregnancies in the TE2 cycles, 5 were clinical (45% per transfer).

Figs. 4 and 5 show the variation of serum E2 and P4 levels with duration of gestation, respectively. Estradiol and P4 levels were obviously elevated by the 5th

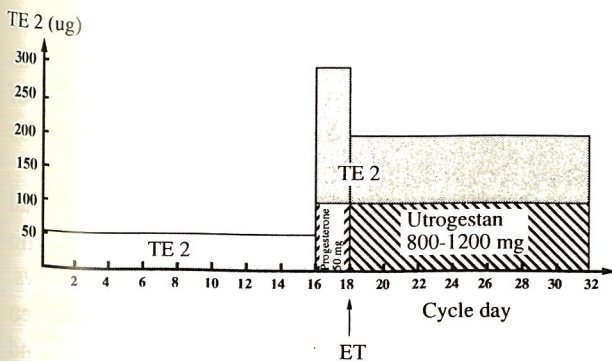


Fig. 3. Transdermal estradiol (TE2) replacement in a donor oocyte program.

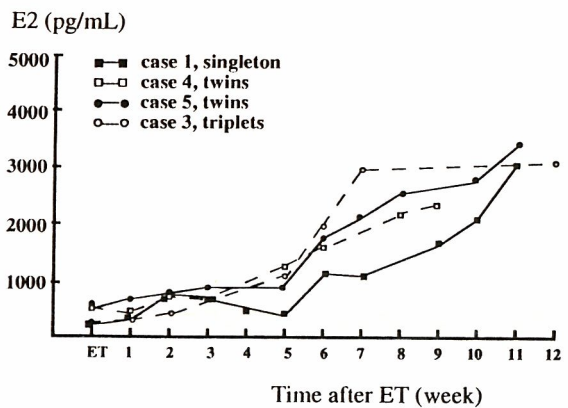


Fig. 4. Serum estradiol (E2) levels with duration of gestation after embryo transfer.