R-093. IUI in infertility treatment

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Introduction: Controlled ovarian hyperstimulation (COH) with intrauterine insemination (IUI) is still widely used for the treatment of female and male infertility. The authors analyse the homologous intrauterine inseminations made over the last 3 years. The aim was to survey the efficacy of IUI with the applied stimulating protocol, in cases with differing indications.

Materials and methods: A total of 152 women were treated with IUI in 298 cycles during the above-mentioned period. The duration of infertility was 2–8 years. Interventions were performed at outpatient clinics, mostly in cases of unexplained infertility, male factor, cervical factor and immunological causes. A maximum of six interventions were scheduled for each couple. Cases of tubal infertility and severe pathozoospermia were excluded during previous examinations and, in these cases, other kinds of treatment were carried out. The patients underwent clomiphene citrate/human menopausal gonadotrophin (HMG) or clomiphene citrate/follicle stimulating hormone (FSH) treatment for ovulation stimulation. The cycles were monitored by ultrasonic folliculometry, measurement of endometrium thickness and stratification starting on cycle day 9. Ovulation was induced by administering 10 000 IU human chorionic gonadotrophin (HCG), and insemination was carried out 36–40 h later. The luteal phase was supported by progesterone. Spermatozoa were prepared by the 'swim-up' technique.

Results: There were 44 clinical pregnancies among the 152 couples. Most of the pregnancies were conceived during the first three cycles. The pregnancy rate was 14.7% per cycle. The best pregnancy ratio was achieved in male infertility (16.6) and in case of abnormal cervical mucus (30%). There were no severe complications.

Conclusions: IUI is recommended before other assisted reproductive techniques in suitably selected cases. It is relatively simple and the cost is low.

R-094. Effect of HCG administration on follicular blood flow and outcome of IVF

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Objective: To study the effects of human chorionic gonadotrophin (HCG) administration on follicular blood flow and oocyte recovery and embryo quality in in-vitro fertilization (IVF) cycles.

Patients and methods: Women with tubal blockage and normal ovaries function were included. All partners had normal semen analyses. Transvaginal ultrasonography with colour Doppler imaging and pulsed spectral analysis was used to obtain indices of follicular blood flow. Peak systolic velocity (PSV) was used as a measurement of individual follicular flow. All women were scanned on the day of HCG administration and immediately before ultrasound-directed follicle aspiration (UDFA).

Results: A total of 126 follicles were studied. There was a significant correlation between the presence of flow velocity waveforms and oocyte recovery rate ($P < 0.05$ before HCG; $P < 0.0001$ before UDFA). The PSV (cm/s) was significantly higher ($P < 0.0001$ before UDFA) in follicles which yielded an oocyte and a good quality embryo. The effect of HCG on follicular blood flow was highly significant. Follicles which showed an increase in blood flow after HCG administration yielded more good quality embryos compared with the follicles which showed no difference in PSV following HCG administration ($P < 0.0001$). Similarly, factorial increases in follicular blood flow following HCG administration (i.e. no difference versus small increase versus large increase) showed significant differences in the number of good quality embryos obtained ($P < 0.001$).

Conclusions: Follicles with high PSV are most likely to yield oocytes and good quality embryos. Administration of HCG increases follicular blood flow and the factorial rise in PSV after HCG administration is directly correlated with embryo quality.

R-095. Does intracytoplasmic sperm injection improve the outcome in poor responders

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Introduction: Over the past 6 years, intracytoplasmic sperm injection (ICSI) has been the method of choice in cases of severe male factor infertility. Is there any place for this method in poor responders? The purpose of this study was to investigate whether poor responders with a moderate sperm abnormality can benefit from ICSI by transferring a greater number of fertilized ova.

Materials and methods: There were two groups in this study. Group A consisted of 58 patients in an IVF-ET programme with poor response to ovarian stimulation (<3 follicles in each ovary, and serum oestradiol <300 pg/ml on the day of HCG administration). The mean age of women was 31.5 ± 3.6 years and that of men was 39.4 ± 7.8 years. The duration of infertility was 4.6 ± 2.1 years. Basal serum FSH value was 6.4 ± 3.3 mIU/ml. The indication for IVF was tubal factor (61%), unexplained infertility (32%), or endometriosis (7%). Ovarian stimulation was achieved by the long protocol using GnRH analogues. Sperm count on the day of ovarian retrieval showed an average of 18×10^6/ml spermatozoa (±4), with 33% progressive motility (first- and second-degree combined) and 41% normal forms. Forty-two of these patients came back but entered an ICSI procedure (group B) following the same protocol of ovarian stimulation. Sperm count of the day of ovarian retrieval showed an average of 19×10^6/ml (±4) spermatozoa with 31% progressive motility and 42% normal forms.