

Design: A prospective, comparative study.

Materials and Methods: Luteal phase GnRH daily agonist long protocol is given to patients in routine practice in our ART unit. Down regulation confirmation was checked after fourteen days. Patients were considered as eligible to our study when the LH level was below 1 IU/l. Depending on the treatment group, they received either rec-hFSH combined with rec-hLH at a fixed dose of 75 IU per day or rec-hFSH alone. In both groups, the starting dose of rec-hFSH was determined according to the patient's profile.

Results: One hundred patients are planned, 44 patients have completed the treatment. Demographic characteristics were comparable between groups (mean age of 33.5, basal FSH of 6.5 IU/l, ART attempt range of 1.8). The mean LH level at the end of down regulation was 0.7 IU/l. The total dose of rec-hFSH, the stimulation duration, the number and quality of oocytes, and the number and quality of embryos are comparable between groups. A significant difference was found in terms of implantation rate ($p < 0.01$) and pregnancy rate ($p = 0.05$). This study is still ongoing and the final results will be presented at ASRM.

	Rec-hFSH + rec-hLH N= 24	Rec-hFSH alone N= 20	p
Total dose of rec-hFSH (IU)	2633 ± 1331	2664 ± 1112	NS
Stimulation duration (days)	12.2 ± 1.3	12.1 ± 1.4	NS
E2 level on day hCG (pg/ml)	2746 ± 1442	2752 ± 1302	NS
Number of oocytes retrieved	10.1 ± 4.2	11.4 ± 5.0	NS
Pourcentage of mature oocytes	84%	79%	NS
Number of embryos obtained	6.0 ± 3.0	6.2 ± 4.1	NS
Pourcentage of "good quality" embryos	66%	63%	NS
Number of embryos transferred	2.1 ± 0.8	2.1 ± 0.8	NS
Implantation rate per embryo transfer (%)	17%	4.4%	< 0.01
Pregnancy rate / OPU (%)	37.5%	10%	0.05

Conclusion: These data show that adding rec-hLH (Luveris(r)) at a fixed daily dose of 75 IU in patients having an LH deficiency induced by GnRH agonists may improve the ovarian response.

Tuesday, October 14, 2003
4:00 P.M.

O-179

Recombinant luteinizing hormone "Add-Back" in normogonadotropic women treated with recombinant follicle stimulating hormone and cetrorelix acetate: A randomized, prospective trial. William B. Schoolcraft, Mark V. Sauer, Gary Frishman. Colorado Ctr for Reproductive Medicine, Englewood, CO; Ctr for Women's Reproductive Care, New York, NY; Women and Infant's Hosp, Providence, RI.

Objective: To determine the clinical benefit/s of adding Luveris® (recombinant human luteinizing hormone) to rhFSH for follicular development in conjunction with Cetrotide® 3mg (CET) administration.

Design: Prospective, randomized, multi-center trial.

Materials and Methods: Normogonadotropic patients, qualified for ICSI, were randomized in a 1:1 ratio to receive either: 1) oral contraceptive pill (OCP) + Cetrotide® 3 mg + Gonal-F(r) Multi-Dose (Group A, n = 24) or 2) OCP + Cetrotide 3 mg + Gonal-F Multi-Dose + Luveris (Group B, n = 24). OCP pre-treatment initiated on menses day 1 and continued 14 to 28 days. Patients in both groups began rhFSH therapy five days after their last OCP. CET 3mg was given by subcutaneous injection (SC) on stimulation day 7. If the patient did not achieve follicular maturation and receive rhCG by stimulation day 11, CET 0.25 mg was administered on Day S11 and each preceding day up to but not including the day of rhCG administration. Patients in Group B were treated with CET in the same manner as Group A, but also received rhLH 150 IU SC on stimulation days 7-10. For all patients, the initial rhFSH dose was 225 IU SC for five days, with dose adjustments thereafter. When at least one follicle of mean diameter ≥ 18 mm and at least two other follicles of mean diameter ≥ 16 mm, 250 mcg rhCG (Ovidrel®) was given. Following ovum pickup, ICSI was performed on the oocytes. The primary efficacy endpoint, number of metaphase II oocytes, was analyzed using a two-way analysis of variance (ANOVA) model for treatment and center effect. Continuous secondary efficacy endpoints were analyzed by ANOVA. Dichotomous parameters were analyzed using logistic regression with effects for treatment and center. Nominal-scaled and ordinal-scaled categorical parameters with >2 levels was analyzed using Cochran-

Mantel-Haenszel general association test and row means score test, respectively, adjusted for center.

Results: Overall, the demographic and baseline characteristics of the two groups were similar. Mean age (years) in Group A (32.3 ± 4.1) and Group B (32.7 ± 3.8) were comparable. The median number of metaphase II oocytes retrieved for patients in the intention to treat (ITT) population was also similar: 11.0 (range 0.0, 33.0) for Group A and 10.0 (range 0.0, 41.0) for Group B. Comparisons between the groups (A and B, respectively) showed no significant differences for the following secondary efficacy endpoints: duration of stimulation (9.0 ± 1.4 , 9.1 ± 1.7), total dose (IU) of Gonal-F Multi-Dose (2143.8 ± 411.9 , 2150.0 ± 604.8), follicles >14 mm on the day of hCG administration (13.7 ± 8.1 , 14.1 ± 8.6), number of 2PN fertilized oocytes (9.3 ± 5.4 , 10.1 ± 7.6), implantation rate (%) per embryo transferred (23.8 ± 25.6 , 29.7 ± 37.3), and number of available embryos (4.5 ± 2.4 , 5.1 ± 5.1). For the secondary efficacy endpoint of E2 level per follicle >10 mm on the day of r-hCG administration, Group A had a significantly lower E2 level per follicle >10 mm on the day of hCG vs. Group B, 97.1 ± 17.5 vs. 152.1 ± 15.8 , respectively ($p = 0.022$). Clinical pregnancy rates were similar: Group A - 12 of 24 (50.0%); Group B - 11 of 25 (45.8%).

Conclusions: This study was intended to provide preliminary information on the efficacy and safety of Cetrotide 3 mg with or without Luveris. In normogonadotropic women treated with rhFSH and CET, the addition of rhLH did not provide clinically significant improvement in treatment outcomes. An adequately powered study is required to confirm these results.

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Tuesday, October 14, 2003
4:15 P.M.

O-180

Increasing the dose of human menopausal gonadotrophins on day of GnRH antagonists administration: A randomized controlled trial. Mohamed A. Aboulghar, Ragaa T. Mansour, Gamal I. Serour, Hesham G. Al-Inany, Yehia Amin, Ahmed M. Abou-Setta. The Egyptian IVF-ET Ctr, Cairo, Egypt.

Objective: There is evidence in the literature which showed that in IVF/ICSI cycles, GnRH antagonist protocols resulted in a significantly lower pregnancy rates as compared to the long GnRH agonist protocol. The cause of this difference is not exactly known. The objective of this study is to investigate whether increasing the dose of gonadotrophins on the day of antagonist administration in GnRH antagonist protocols would increase the pregnancy rate.

Design: Open labeled, single center, randomized controlled trial, allocation was done using sealed envelopes.

Setting: The Egyptian IVF-ET Center, Maadi, Cairo.

Participants and Methods: 151 subfertile couples undergoing IVF /ICSI cycles were included in this study. Ovarian stimulation started on day 3 of the cycle by giving 150-300 IU hMG / day depending on the age and the weight of the patient for five days then the dose was modified according to the ovarian response. From day 8 onward, daily vaginal ultrasound and daily urinary luteinizing hormone (LH) estimation were performed. If premature LH rise was detected the cycle was cancelled. The antagonist (0.25mg daily) was started when the leading follicle reached 15 mm in mean diameter and LH testing in urine was negative till and including the day of hCG injection. Patients were randomized into two groups: (group A : 72 with no increase in hMG dose) and group B (79 in whom the dose of hMG was increased by 75IU on the day of antagonist administration) and continued this increased dose until the day of hCG administration.

Results: Both groups showed similar patients characteristics. There was no statistically significant difference between both groups regarding number of oocytes retrieved, embryos obtained, implantation rate, clinical pregnancy rate, multiple pregnancy rate (Implantation rate 19.1% in group A and 17.2% in group B / Clinical pregnancy rate 34.0% vs 35.1% [O.R for PR (1.3 (95% C.I 0.63-2.6)] / multiple pregnancy rate (41.2% vs 38.9%).

Conclusion: There is no evidence that increasing the dose of hMG on day of antagonist administration improves the clinical outcome of IVF.