Tuesday, October 14, 2003
4:30 P.M.

O-181

The old is still beautiful: A meta-analysis of recombinant FSH versus human menopausal gonadotrophins. Hesham G. Al-Inany. Cairo Univ, Cairo, Egypt.

Objective: The renewed interest in LH together with limited and decreasing health resources in developing countries, make it essential for recombinant FSH preparations with their high cost to be compared to human menopausal gonadotrophins (which is almost half price) regarding clinical efficacy.

Design: Meta-analysis of randomised controlled trials.

Materials and Methods: All published truly randomized controlled trials comparing recombinant FSH vs hMG under different protocols of stimulation. Data of ongoing pregnancy/live birth rate, clinical pregnancy rate, miscarriage rate, multiple pregnancy rate and ovarian hyperstimulation syndrome were extracted and odds ratio were calculated with the use of a fixed effect model. The data combined for meta-analysis with RevMan software (using the Mantel-Haenszel method).

Results: Seven truly RCTs included in this meta-analysis recruiting 1981 participants (Jansen 1998; Gordon 2001; Ng 2001; Strehler 2001; Westergaard 2001; Diedrich 2002, Kilani 2003). Two trials were excluded (Serhal 2000, Kornilov 1999). Pooling the results of these RCTs has shown no significant difference between recombinant FSH and hMG regarding different outcomes. (ongoing pregnancy/live birth rate O.R 1.2 (95% C.I 0.95-1.54), clinical pregnancy rate O.R 1.2 (95% C.I 0.99-1.47), miscarriage rate O.R 1.2 (95% C.I 0.70-2.16), multiple pregnancy rate O.R 1.35 (95% C.I 0.96- 1.90) and incidence of moderate /severe OHSS O.R 1.79 (95% C.I 0.74- 4.33). There was no significant heterogeneity of treatment effect across the trials.

Conclusion: There is no difference in clinical efficacy between both types of gonadotrophins. Accordingly, decision makers should establish their choice of one drug over the other based on the most up-to-date available evidence.

Tuesday, October 14, 2003
4:45 P.M.

O-182

Evaluation of mixed protocols with Bravelle (hFSH) and Repronex (hMG) to assess clinical efficacy (EMBRACE): A comparison of patients 18-33 years and 34-40 years undergoing in vitro fertilization. Alfred J. Rodriguez, Aaron S. Lifchez, Barry R. Witt, Gerald M. Scholl, Vishvanath C. Karande, Dennis C. Marshall. Presbyterian Plano ARTS Ctr, Plano, TX; IVF Lincoln Park, Chicago, IL; Albert Einstein Coll of Medicine, Div of Reproductive Endocrinology, Bronx, NY; Ctr for Human Reproduction, Manhasset, NY; American Infertility Group of Illinois, Hoffman Estates, IL; Ferring Pharmaceuticals, Inc., Suffern, NY.

Objective: To compare the efficacy and safety data of three different ratios of hFSH:hMG (Bravelle and Repronex) mixed together and administered once-daily in a single, subcutaneous injection in patients <34 or 34-40 years old undergoing IVF.

Design: Randomized, prospective, age-stratified, IVF study comparing three different ratios of hFSH:hMG.

Materials and Methods: Patients received leuprolide (LA, 0.5 mg, OD, SC) starting seven days before the onset of menses and continuing for ≤ 20 days until estradiol (E2) was ≤ 45 pg/ml with endometrial lining ≤ 6mm. Thereafter, LA was reduced to 0.25 mg/day and continued until the day before hCG. Patients were randomized to treatment group (Tx) A, B or C for ≤ 15 days. The hFSH:hMG vial ratios for each group (to a maximum of 450 IU FSH): TxA, 1:1 ratio throughout; TxB, 3:0 ratio then to a 1:1 ratio after gonadotropin stimulation (GS) day 5; TxC, 2:1 ratio sequentially adjusted after GS day 5 to 3:1, 4:1 or 5:1 as needed. When ultrasound showed ≥ 3 follicles with diameters ≥16 mm, and acceptable E2 levels, GS was stopped and hCG (10,000 IU IM) given the next day; oocytes were retrieved 34-36 hrs later. Primary efficacy was the number of oocytes retrieved.

Results: Overall, patients <34 yrs. had higher E2 levels, more oocytes retrieved and improved fertilization rates compared with patients 34-40 yrs. Nonetheless, each ratio of hFSH:hMG produced excellent implantation and continuing pregnancy results and excellent take-home baby rates.

RESULTS: Embryo Transfer and Preganancy Rates

Parameter	Tx A 1:1 FSH:hMG <34 yrs. N=35	Tx A 1:1 FSH:hMG 34-40 yrs. N=41	Tx B hMG add on <34 yrs. N=39	Tx B hMG add on 34-40 yrs. N=40	Tx C Low dose hMG <34 yrs. N=34	Tx C Low dose hMG 34-40 yrs. N=39
Embryos transferred (mean± SD)	2.8 (0.9)	2.6 (1.0)	2.5 (1.2)	2.4 (1.2)	2.7 (1.0)	2.3 (1.1)
Implantation rate (%)	28.1	31.0	32.0	25.0	28.3	30.1
Patients with clinical pregnancy (%)	16 (47.1)	18 (47.4)	17 (43.6)	15 (41.7)	16 (47.1)	20 (55.6)
Patients with continuing pregnancy (%)	16 (47.1)	17 (44.7)	16 (41.0)	15 (41.7)	15 (44.1)	16 (44.4)
Patients with live births (%)	16 (47.1)	16 (42.1)	15 (38.5)	11 (30.6)	14 (41.2)	14 (38.9)
Patients with any adverse events (%)	19 (54.3)	18 (43.9)	19 (48.7)	23 (57.5)	25 (73.5)	19 (50.0)*
Patients with serious adverse events (%)	2 (5.7)	1 (2.4)	2 (5.1)	2 (5.0)	1 (2.9)	0 (0.0)

*p<0.05; <34 yrs. vs 34-40 yrs.

RESULTS: Demographic and Ovarian Stimulation Parameters

Parameter	Tx A 1:1 FSH:hMG		Tx B hMG add on		Tx C Low dose hMG	
Age (mean± SD; yrs)	30.0 (2.2)	36.3* (2.0)	30.0 (2.3)	36.8* (1.9)	30.5 (2.0)	36.8* (1.9)
BMI (kg/m^2) (mean± SD)	24.2 (3.7)	24.9 (4.3)	24.2 (4.4)	24.9 (4.9)	24.3 (4.7)	24.2 (4.4)
Duration of treatment (mean days± SD)	9.4 (1.7)	9.5 (1.8)	9.4 (1.2)	9.5 (2.0)	9.9 (1.4)	9.2 (1.9)
Total FSH dose (mean IU± SD)	2167.5 (690.9)	2488.7 (909.0)	2319.2 (551.2)	2556.5 (905.6)	2616.2 (687.3)	2465.4 (840.0)
Peak serum E_2levels (mean± SD; pg/ml)	2988.4 (1599.9)	1809.6* (1081.4)	1908.2 (1058.2)	1768.2 (1475.8)	2222.0 (780.7)	1428.7* (1114.3)
Patients with oocyte retrieval and embryo transfer (%)	32 (94.1)	37 (97.4)	34 (87.2)	32 (88.9)	32 (94.1)	34 (94.4)
Total oocytes retrieved (mean± SD)	16.7 (6.2)	11.5* (6.7)	13.6 (9.3)	11.4 (5.5)	15.5 (10.2)	9.6* (6.8)

*p<0.05; <34 yrs. vs 34-40 yrs.

Conclusion: Patients <34 and 34-40 yrs. had modestly different efficacy responses which were attributable more to the patient's age than to the ratio of hFSH:hMG. All three ratios of hFSH:hMG in both age groups produced excellent pregnancy and live birth rates with comparable safety results.

Tuesday, October 14, 2003
5:00 P.M.

O-183

A prospective randomized and blinded comparison between urinary and recombinant HCG for oocyte maturation in IVF cycles. Vicente Abdelmassih, Flavio G. Oliveira, Sergio P. Goncalves, Adriana D. Varella, Michael P. Diamond, Roger Abdelmassih. Clin e Ctr de Pesquisa em Reproducao Humana Roger Abdelmassih, Sao Paulo, Brazil; Wayne State Univ, Detroit, MI.

Objective: It is well known that both hCG and LH can stimulate the same receptor. The hCG extracted from urine from pregnant women has been widely used in the induction of oocyte maturation in IVF cycles. Lack of purity and variation in activity have been cited as possible disadvantages of urinary hCG. Choriogonadotropin alfa (Ovidrel®, Serono Inc., Sao Paulo, SP) is a recombinant hCG (rhCG) preparation purified by repeated chromatographic steps in order to produce a drug with a high specific activity. The objective of this study was to compare the effects of conventional urinary hCG (Profasi HP, Serono Inc., Sao Paulo, SP) to those of recombinant hCG (Ovidrel®, Serono Inc., Sao Paulo, SP) in IVF cycles.

Design: Eighty patients undergoing IVF cycles were randomically assigned, on the day of hCG administration for oocyte maturation, to receive either urinary hCG (Profasi HP® 10000 IU, Serono Inc, São Paulo, SP) or recombinant hCG (Ovidrel® 250mg, Serono Inc., Sao Paulo, SP).

Materials and Methods: Patients ≤ 35 years old with IVF indication were submitted to a standard long GnRH protocol of ovarian stimulation per-