A Randomized Study of Recombinant Versus Urinary Human Chorionic Gonadotrophin in Chinese Women Undergoing Assisted Reproductive Technology Cycles. Q. Jie, Z. Guijin, H. Guoning, Peking University No.3 Hospital, Department of OB/Gyn, Beijing 100083, China; Huazhong Technical University Tongji Hospital, Department of Genetics and Assisted Reproduction, 1095 Jiefang Avenue, Han Kou, Wuhan 430030, China; Chongqing Gynaecology and Obstetrics Hospital, Department of Assisted Reproduction and Genetics, 46 JinTang Street, Chongqing 400013, China.

OBJECTIVE: To compare the efficacy of recombinant human chorionic gonadotrophin (r-hCG) with that of urinary hCG (u-hCG) for triggering ovulation in patients undergoing assisted reproductive technology (ART) cycles. 

DESIGN: 217 patients undergoing ART in China were randomized (1:1) to receive r-hCG or u-hCG to trigger ovulation.

MATERIALS AND METHODS: Infertile women between 21 and 35 years old with a BMI < 25 kg/m², with regular cycles of 25-35 days, received standard long-protocol downregulation. Recombinant follicle stimulating hormone (Gonal-F®; Serono) was started on day 3 of the cycle. When one follicle reached ≥18mm in diameter and at least 2 other follicles were ≥16mm, subjects were administered hCG (Ovulation® freeze-dried 250mcg, Serono, subcutaneous or Profasi® 10000IU, Serono, intramuscular) on the next day. After 36 hours, oocytes were retrieved for in vitro fertilization. Up to 3 embryos were transferred. On day 14 of embryo transfer, serum hCG pregnancy test was conducted. Subjects with a positive test result were followed up. Progesterone was given for luteal phase support. The primary efficacy endpoint was the total number of oocytes retrieved. Other outcomes measured included the number of transferable embryos, and rates of implantation, clinical pregnancy and miscarriage. Chi-square test or Fischer’s Exact test were used for the analysis of categorical data and a two-sided t-test for continuous data.

RESULTS: A similar number of oocytes were retrieved in the r-hCG group (14.91 ± 7.56, n = 110), and the u-hCG group (15.37 ± 6.02; n = 107; p = ns). No significant difference between groups in terms of the number of oocytes retrieved, the number of two pronuclei-fertilized oocytes (r-hCG: 9.50 ± 8.47, n = 109 vs u-hCG: 9.51 ± 4.77, n = 107), transferable embryos (r-hCG: 8.35 ± 5.30; n = 107 vs u-hCG: 8.24 ± 4.69, n = 106), or endometrial thickness on the day of oocyte retrieval (r-hCG: 10.71 ± 1.44, n = 110 vs u-hCG: 10.60 ± 1.39, n = 107) were observed. The mean concentrations of serum progesterone on the day of hCG and on Day 14 of embryo transfer were similar in both groups. There was a non-significant trend towards a higher pregnancy rate in the r-hCG group (biochemical pregnancy: 55/110, 50.0%; clinical pregnancy: 45/110, 40.9%) compared with the u-hCG group (biochemical pregnancy: 42/107, 39.3%; clinical pregnancy: 35/107, 32.7%).

CONCLUSION: Triggering ovulation with GnRH agonist in GnRH antagonist protocol is an effective alternative in preventing OHSS and achieving comparable clinical pregnancy rate in fresh cycle.

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The Routine use of Follitropin Alfa (Fbm) Pre-Filled Pen for Foliculal Development for IVF. A Large Multinational Observational Study in Northern Europe. O. Hovatta, E. McVeigh, R. Homburg, S. Bogle, A. Lass, Karolinska Hospital, Stockholm, Sweden; John Radcliff Hospital, Oxford, United Kingdom; VU Medical Centre, Amsterdam, Netherlands; Aysgarth Statistics, Beaconsfield, United Kingdom; Serono Ltd., London, United Kingdom.

OBJECTIVE: Recently a new, more consistent, pharmaceutical presentation of r-hFSH was introduced. The quantification of the r-hFSH protein content is achieved with a very precise size exclusion liquid chromatography method (SE-HPLC) that enables the product to be filled by mass (GONAL-F®) in which 75IU FSH-activity corresponds to 5.5 mcg of r-hFSH protein. In order to increase the ease of use and accuracy, a pre-filled pen containing a liquid formulation of GONAL-F® has been introduced in Europe in 2004. The objective of this first large observational study was to evaluate the efficacy of routine use of this product in normal IVF practice across 7 countries in Northern Europe and to find out whether this experience is similar in the different countries.

DESIGN: Non-interventional, post-marketing survey in UK, Ireland, Nordic and The Netherlands

MATERIALS AND METHODS: Eighty IVF centres participated in this observational survey between June and December 2004. In total 2967 patients eligible for IVF were enrolled without either protocol or inclusion/ exclusion criteria and each patient could be included only once in the survey. Treatment was according to normal clinical practice of each unit. Gonal-1st® Fbm pre-filled pen was available in 300IU, 450IU or 900IU doses. A short monitoring form was collected following the cycle, which included demographic and clinical performance data. A nurse assessment questionnaire was circulated in the Nordic countries only.

RESULTS: Mean age of the patients was 33.8 years (range 19-51) and 271 (9.2%) were at least 40 years old. Down regulation was attempted in 2479 (83.6%) cycles using the GnRH agonist and in 425 (14.3%) cycles by GnRH-antagonist. hCG was administered in 2864 (96.5%) of the cycles. In

Severe OHSS Can be Prevented in GnRH Antagonist Protocol Using GnRH Agonist to Trigger Ovulation. E. Chun, Mizmedi Hospital, Seoul, Republic of Korea.

OBJECTIVE: To evaluate the efficacy of GnRH agonist for ovulation triggering in GnRH antagonist protocol for the preventive strategy of OHSS

DESIGN: retrospective study

MATERIALS AND METHODS: From June 2004 to March 2005, we reviewed patients who were at risk of OHSS during COH for conventional IVF and ICSI. Patients who had more than 20 follicles greater than 14mm or peak estradiol level higher than 3000 pg/ml were considered at risk of OHSS. In these patients, ovulation was triggered by Lucriner® (leuprolerin, Abbot, Korea) 500 mic-gm twice q12hrs or 1500mic-gm once. 36 hours after initial Lucrine, we performed oocyte recovery and luteal support with estradiol valerate 4-6mg orally and progesterone in oil 50mg, daily.

RESULTS: A total 26 cycles in 26 patients were analyzed. The mean age and peak E2 level were 32.2±2.7 and 3557.8 ±2555.8 pg/ml, respectively. Number of oocytes retrieved was 18.5 ± 8.0 and fertilization rate was 56.3 ± 13.4%. Mean number of embryos transferred was 2.9 ± 1.1. Clinical pregnancy was 26.9%(7/26) and early on-set of OHSS did not occur and only one case of severe OHSS occurred among pregnant cases (3.8%, 1/7).

CONCLUSION: Triggering ovulation with GnRH agonist in GnRH antagonist protocol is an effective alternative in preventing OHSS and achieving comparable clinical pregnancy rate in fresh cycle.

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