0.3±0.6), (CC; 0.9±0.5), (CC+E; 2.0±1.6), and (rFSH; 2.7±1.2) ($p<0.01$). The 10 patients with endometrial thickness <6 mm who had controlled ovarian stimulation with CC on the day of hCG administration (10/10 or 100%) underwent a subsequent cycle with (CC+E). Seven of these patients (70%) developed an endometrial thickness >6 mm, and there was one pregnancy (1/10 or 10%). Endometrial thickness <6 mm on the day of hCG administration was not detected in the natural or rFSH cycles. The pregnancy rate in the rFSH cycle group was (2/4 or 50%).

CONCLUSION: Endometrial thickness improves (> 6 mm) when estrace is added to the regimen (CC+E). In this study, ovarian stimulation with CC+E demonstrated improved endometrial development (>6 mm), even with the higher CC dose (150 mg). Patients undergoing controlled ovarian stimulation with rFSH had an increased number of available follicles, estradiol concentration, and endometrial thickness. Additionally, they demonstrated a significantly higher pregnancy rate without negative effect on endometrial thickness.

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P-769

A COMPARISON OF MENOTROPINS AND RECOMBINANT GONADOTROPHINS FOR CONTROLLED OVARIAN STIMULATION IN ICSI CYCLES. S. C. Esteves, S. Verza Jr., A. P. Gomes, D. T. Schneider, S. F. Zabaglia. ANDROFERT-Centro de Referência em Infertilidade Masculina, Campinas, Brazil.

OBJECTIVE: The use of different gonadotropins preparations has been advocated based on their role in oocyte maturation, feature in quality and technical development, dosing, and finally it has been largely debated if accuracy will improve efficacy and consequently overall cost. Over a six-year period, we changed from urine-derived to recombinant gonadotropins. We have now audited our clinical practice and compared clinical and laboratory efficacy of three different gonadotropins used for ovarian stimulation in ICSI cycles.

DESIGN: Retrospective study in a tertiary center for male infertility.

MATERIALS AND METHODS: We retrospectively analyzed 783 consecutive ICSI cycles performed from January 2000 to July 2005. Controlled ovarian hyperstimulation (COH) was achieved using human menopausal gonadotrophin (HMG: Menogon®, Ferring; n=299), highly-purified HMG (HP-HMG: Menopur®, Ferring; n=330) or recombinant FSH (rFSH: Gonal-F®, Serono; n=154). Laboratory and clinical protocols remained unchanged over time, the latter differing only in the type of gonadotropin, being introduced sequentially in our practice, starting with HMG, then HP-HMG and finally rFSH. Data compared included duration of stimulation and total dose of gonadotropin, cancellation rate, number of oocytes retrieved, number of mature oocytes, fertilization rate, percentage of good quality embryos available for transfer, number of transferred embryos, implantation rate, clinical pregnancy rate and spontaneous abortion rate. ANOVA, Kruskal-Wallis and Chi-square tests were used for comparisons, with a alpha level of 0.05 for significance.

RESULTS: Female age, duration of stimulation (days), total dose of gonadotropin, cancellation rate, number of oocytes retrieved, number of mature oocytes, fertilization rate, percentage of good quality embryos available for transfer, number of transferred embryos, implantation, clinical pregnancy, miscarriage and live birth rates were: (32.5±5.3, 34.0±4.7, 34.3±4.8; $p<0.001$), (9.5±1.3, 9.9±1.3, 10.2±0.9; $p<0.001$), (2,684±720UI, 2,876±867UI, 2,105±734UI; $p=0.001$), (7.7%, 6.4%, 6.5%; NS), (10.9±6.8, 10.7±6.5, 11.3±6.8; NS), (8.9±5.6, 8.9±6.5, 9.0±6.0; NS), (72.0±25.0%, 72.0±22.0%, 71.0±23.0%; NS), (40.0±30.0%, 47.0±31.0%, 36.0±28%; $p=0.001$); (3.4±1.6, 3.4±1.5, 3.3±1.6; NS), (16.0±24.0%, 19.0±27.0%, 15.0±22.0%; NS), (35.5%, 40.0%, 35.1%; NS), (24%, 19%, 6,0%; $p=0.03$), (27.1%, 32.4%, 32.9%; $p=0.04$) in HMG, HP-HMG and rFSH groups, respectively.

CONCLUSION: Our results indicate better laboratory and clinical efficaccy of both HP-HMG and rFSH as compared to HMG for COH in ICSI cycles. Despite the fact that the HMG group included younger patients, which may justify the lower duration of stimulation, a significant higher live birth rate in both HP-HMG and rFSH groups has been achieved as compared to HMG group. Finally, we observed a ~30% reduction in the amount of gonadotropin used for ovarian stimulation when rFSH was introduced to our clinical practice, suggesting a direct impact on overall treatment cost.

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P-770

INFLUENCE OF GNRH PROTOCOLS ON THE ESTRADIOL SERUM LEVEL AND NUMBER OF MATURE OOCYTES (MII) RETRIEVED. W. C. Busato, A. Iaconelli Jr., L. L. Maldonado, F. F. Pasqualotto, D. Braga, E. Borges Jr. Fertility - Assisted Fertilization Center, Sao Paulo, Brazil; Univ. of Caxias do Sul, Caxias do Sul, Brazil.

OBJECTIVE: Physiologic interactions among cell within the ovarian follicle, both theca and granulosa, is required for adequate E2 biosynthesis and the acquisition of oocyte developmental competence. Circulating E2 during controlled ovarian stimulation (COS) for *in vitro* fertilization (IVF), represents the sum of E2 produced by all FSH-primed follicles combined. Recent evidence demonstrates that dominant follicle development and E2 production are also dependable on late-follicular phase LH concentrations. In contrast to GnRH agonists, the suppression of LH by GnRH antagonist is more pronounced, and the effects on follicle dynamics and ovarian E2 production have not been well studied. The aim of this study was to investigate the influence of E2 serum levels on mature (MII) oocytes recovery rate, on COS using GnRH agonist or antagonist protocols, for IVF cycles, in different age groups.

DESIGN: Prospective study.

MATERIALS AND METHODS: A total of 293 women submitted to COS for ICSI were included in the present study. Pituitary down-regulation with GnRH agonist, long protocol - leuprolide 500 μg (agonist-group: 156 cycles), or GnRH antagonist - cetrorelix 250 μg (antagonist-group: 97 cycles) was performed. In both groups were used recombinant-FSH (Gonal-F®, Serono) in step-down protocol. Serum E2 levels were measured at the day of hCG trigger and oocytes were retrieved 36 hours later. Statistical analysis used ANOVA and P *value*<0.05 was considered statistically significant.

RESULTS: E2 levels were inversely proportional to age (≤35 years old: 2594 ± 1654 pg/mL; 36 to 39: 2072 ± 1344 pg/mL; ≥ 40: 1366 ± 740 pg/mL; $p<0.001$), as well as number of MII oocytes retrieved (≤35 years old: 11.8 ± 7.6, 36 to 39: 8.1 ± 4.0, ≥ 40: 6.7 ± 4.6; $p<0.001$). However, the E2 per MII oocytes retrieved rate was similar (≤35 years old: 272.8 ± 269.5 pg/mL, 36 to 39: 284.3 ± 158.4 pg/mL, ≥ 40: 246.9 ± 169.4 pg/mL; $p=0.805$). When agonist and antagonist-groups were compared, the E2 levels (agonist-group: 2255 ± 1393 pg/mL, antagonist-group: 2474 ± 1781; $p=0.277$) and E2 per MII oocytes rate were similar (agonist-group: 284.3 ± 278.7 pg/mL, antagonist-group: 257.1 ± 136.9; $p=0.372$). On the other hand, patients ≤35 years old in agonist-group had lower E2 levels (2384 ± 1409 pg/mL) than antagonist (2898 ± 1927; $p=0.054$), although the same E2 per MII oocytes rate had been observed (agonist-group: 274.2 ± 330.1 pg/mL, antagonist-group: 270.9 ± 144.8; $p=0.941$).

CONCLUSION: Previous studies reported that each follicle is able to produce 250 a 280 pg/mL of E2. In this manner, our findings suggest that recovery of MII oocytes may be presupposed according to the serum E2 level on the day of the hCG administration, as we could observe that the ratio E2/MII were similar among different group of ages. Furthermore we could observe that MII recovery rate and serum E2 level had been similar when both GnRH treatments were used, however, when patients ≤ 35 years were evaluated, it was observed an increase in serum E2 level in antagonist-group when compared to the agonist-group, without any improvement, however, in the MII oocytes recovery.

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P-771

PRELIMINARY EXPERIENCE WITH A LOW COST OVARIAN STIMULATION PROTOCOL IMCLUDING LETROZOLE AND HMG FOR ART IN NORMAL RESPONDERS. A. Grabia, S. Papier, R. Pesce, L. Mlayes, S. Kopelman, C. E. Sueldo. Center for Studies in Gyn and Reproduction (CEGYR), Buenos Aires, Argentina.

OBJECTIVE: To assess the effectiveness of an ovarian stimulation protocol with an aromatase inhibitor (letrozole) and low dose HMG for ART in normal responders with limited economic means