INFLUENCE OF HUMAN MENOPAUSAL GONADOTROPIN (HMG) ON OOCYTE AND EMBRYO QUALITY IN INTRACYTOPLASMIC SPERM INJECTION CYCLES. A RETROSPECTIVE COMPARATIVE STUDY HMG VS GONAL F.

A. Boukadida, A. Khlifi, S. Chachia, S. Meddeb, A. Chaieb, M. Ajina, M. Bibi, H. Essaidi, H. Khairi

Objective: evaluate the influence of ovarian stimulation by urinary gonadotropins (hMG) on oocyte and embryo quality in ICSI cycles.

Materials and methods:
Comparative retrospective study at the medical unit of the reproduction in the department of Obstetrics and Gynecology University Hospital Farhat Hached Sousse (Tunisia) over a period of 4 years (January 2008 - December 2011). 1006 ICSI cycles were included and analyzed. All women included had the criteria of normal responders. The results of the hMG stimulated ICSI (n = 126) cycles were compared to those stimulated by Gonal F (n = 880). Statistical analysis was performed by means of the SPSS 18.0 software.

Résultats:
Both groups were comparable regarding the initial mean FSH levels (7.7 ± 2.53 (hMG) vs. 7.5 ± 4.96 (Gonal F), p = 0.665) and the average initial rate estradiol (74.3 pg / ml vs 76 pg / ml, p = 0.066). They were also comparable, the day of ovulation induction, regarding the average thickness of the endometrium (10.1 ± 1.8 vs 10.3 mm ± 1.9 mm, p = 0.191) and the mean estradiol levels (2781 ± 1122 pg / ml vs 2810 ± 1386 pg / ml, p = 0.821). However, ovarian stimulation hMG was associated with a lower number of oocytes retrieved (7.89 ± 2.5 vs 9.07 ± 3.4, p < 0.01) and a lower number of oocytes metaphase II (5.98 ± 2.7 vs 6.66 ± 3, p = 0.019). Furthermore, there were no differences regarding the oocyte maturation rate (76% vs 74%, p = 0.335), the segmentation ratio (p = 0.725), the I-type embryo rate (58 % vs 62%, p = 0.165) and clinical pregnancy rates (19% vs 21%, p = 0.131).

Discussion and conclusion:
Ovarian stimulation by the urinary gonadotropin influences negatively ovarian response, without sounds on the embryo quality or on clinical pregnancies.