Materials and Methods: The partners of patients (n=75) had a normal semen analysis which was proved in previouse IVF cycles. Immature oocytes were collected on day 1014 of a menstrual cycle. The patients were primed with either none (54 patients) or 10,000 IU of hCG (21 patients) before the oocytes collection. A transvaginal ultrasound machine with 19-gauge aspiration needle was used to aspirate follicles between 5 and 14 mm in diameter. Follicular aspirates were filtered with 70-m (in hole size) mesh and washed with medium, and then COCs were isolated under a stereomicroscope. The normal COCs were cultured in maturation medium, YS medium with 70% (v/v) human follicular fluid (hFF). After culture for 24 hours, the oocytes were denuded of cumulus cells with hyaluronidase and mechanical pipetting and oocyte nuclear maturation was assessed from the presence of the first polar body under the dissecting microscope. Following examination, matured sibling oocytes were randomly divided into conventional IVF and ICSI for fertilization. Fertilization was assessed 17~19 h after IVF or ICSI.

Results: After culture for 24 hours, the rate of maturation in non-primed and hCG-primed group was 45.1% (338/749) and 60.1% (194/323), respectively. In the non-primed group, the fertilization rate (82.1%, 151/184) in ICSI was significantly higher than that of conventional IVF (69.5%, 107/154). In the hCG-primed group, the fertilization rate in ICSI (89.8%, 88/98) was also significantly higher than in the IVF (63.5%, 61/96) group. There was no differences on fertilization rate between the non- and hCG-primed IVM/F-ET cycles.

Conclusions: This study suggests that ICSI is the best option for increase the fertilization rate and the transferrable embryos of *in vitro* matured human oocytes derived from women undergoing IVM/F-ET cycles, although the acceptable fertilization rate can be achieve using conventional IVF.

M-14 The Effects of Body Mass Index on Hormonal Status and Glucose Metabolism in Women with Chronic Anovulation

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Objective: To assess the difference of hormonal status and confirm the risk factors for long term complication according to Body Mass Index in women with chronic anovulation.

Materials and Methods: Serum level of LH, FSH, Estradiol, Prolactin, Testosterone, DHEA-S, fasting insulin were measured and 100 gm oral glucose tolerance test and endometrial biopsy were performed in total 75 chronic anovulation patients and 20 normal cycling infertility patients. 95 evaluated patients were divided into 3 groups including patients with chronic anovulation having BMI below 25, BMI beyond 25, normal cycling infertility patients, Group 1 (n=39), Group 2 (n=36), Group 3 (n=20), respectively. Statistical analysis was performed respect to relationship between BMI and measured hormone level, sum of glucose level during 100 gm OGTT, insulin resistance, endometrial biopsy reults using t-test, ANOVA test, Post Hoc test, Mann-Whitney test. $p<0.05$ was considered as statistically significant.

Results: Serum LH level, LH/FSH ratio was significantly higher in Group 1 (p=0.011, p=0.007), BMI and LH, LH/FSH ratio was negatively correlated (Pearson Correlation, -0.351, -0.318). There was no significant difference according to BMI in FSH, testosterone, estradiol, prolactin, DHEA-S level. Fasting insulin and sum of glucose level during 100 gm OGTT were significantly higher in Group 2 compared than Group 1 or Group 3 ($p<0.05$), there was no significant difference between Group 1 and Group 3. Insulin resistance was more frequently identified in Group 2 compared than Group 1 (p=0.039) but there was no difference between chronic anovulation and normal cycling groups. Endometrial hyperplasia was more frequently identified in lower BMI group (p=0.009).

Conclusions: BMI and LH, LH/FSH ratio was negatively correlated, so clinical significance of LH, LH/FSH ratio in diagnosis of PCOS may be attenuated by increasing body weight. Overweight patients with chronic anovulation may be the high risk group for developing insulin resistance, hyperinsulinemia, glucose intolerance, later type 2 DM. Hyperinsulinemia may operate mainly in overweight chronic anovulation patients in development of hyperandrogenism. Higher incidence of endometrial hyperplasia in normal weight patient with chronic anovulation may be due to difference of estrogen clearance, but further study will be needed.

M-15 Successful Treatment with Intravenous Immunoglobulin in Women with Recurrent Spontaneous Abortion and Elevated Natural Killer Cells in Peripheral Blood

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Objective: The purpose of this study is to investigate the efficacy of IVIG treatment in women with RSA, particularly for women with elevated NK cells in peripheral blood.

Methods: Fifty-four women who had a history of recurrent spontaneous abortion (RSA) and elevated peripheral blood NK cells in non-pregnant status (CD+56, CD+16 cells >15% of peripheral blood cells) were involved in this study. Forty-three patients received IVIG treatment (IVIG Group) and 11 patients were refused this treatment (untreated group) despite of recommendation. Peripheral blood immunophenotype assay was performed by flow cytometry. The IVIG treatment at a dose of 0.5 gm/kg was started at 4~6 weeks of gestation and was continued every 3 weeks through 20~24 weeks of gestation.

Results: Mean age and mean number of prior miscarriages were not significantly different between IVIG group and untreated group. In IVIG group, six patients delivered, 33 patients were on going their pregnancies beyond 20 weeks of gestation, and 4 patients miscarried. In untreated group, 6 were on going their pregnancies and 5 miscarried. The rate for successful treatment in RSA was significantly higher ($p<0.05$) in IVIG group (90.7%) than in untreated group (54.5%). Two patients had shown adverse reaction,