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,

such as rash, during IVIG infusion.

Conclusions: Our data demonstrate that IVIG treatment is very effective for the patients with RSA and elevated NK cells in peripheral blood. The IVIG treatment should be considered as a treatment of choice in this group.