P7 Effect of Panax Ginseng on Male Reproductive Competence

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Objectives: This study was undertaken to evaluate the effect of **Panax Ginseng (PG)** on the male reproductive functions and to confirm the exact effective dosage of **PG**.

Materials and Methods: At first to investigate the effect of **PG** on the male reproductive function, we used 8-week-old Sprague-Dawley rats. The extract solution of **PG** in 1mg/ml concentration was administered once in a day for 28 days and the same volume of normal saline was administered to the control in the same way and duration.

Then to decide the effective concentration of **PG** on male reproductive functions, we used the 8-week-old mice. 0.2 ml **PG** extract solutions in the different (0.1 mg/ml, 1 mg/ml, 10 mg/ml, 100 mg/ml) concentration were administrated once a day for 60days and 0.2 ml normal saline was given to the control in the same way and duration.

At last to confirm the effective administration days of **PG** on male reproductive functions, we used the 8-week-old mice. 10 mg/ml **PG** extract solutions were administrated once a day for 30, 60, 90 and 120days and normal saline was given to the control in the same way and duration. In all 3 steps of our studies, we observed the number of total, motile and normal morphological sperms.

Results: At first study we could find that the number of total, motile and normal morphological sperms in **PG** treated group was significantly increased than those of control group. In the second step study, the **PG** extract solution groups showed significantly dose dependent differences (to 10 mg/ml) in the number of total, motile and normal morphological sperms compared with the control group. At last we could conclude that the effective administration days of **PG** on male reproductive functions were 90days.

Conclusion: This study shows that **Panax Ginseng** has the beneficial effect on the male reproductive function in 10 mg/ml concentration and the effective dosage is 90days.

Key Words: Panax Ginseng, Male Reproductive Function, dosage

P8 Relationship between SNP in *SORBS1* gene involved in glucose uptake and polycystic ovary syndrome

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Objectives: Since the metabolic actions of insulin are impaired in polycystic ovary syndrome (PCOS), genes coding for proteins involved in insulin-mediated glucose transport can be considered as candidate genes. Sorbin and SH3-domain containing -1 (*SORBS1*) gene codes for C-cb1-associated protein (CAP) involved in insulin-mediated glucose uptake. Therefore, we have analyzed the SNP for *SORBS1* gene which may be associated with PCOS in Korean women.

Materials and Methods: The single nucleotide polymorphism (SNP) of *SORBS1* gene was analyzed with a restriction fragment length polymorphism (RFLP) method. For the analysis of SNP for *SORBS1* gene, we included 208 PCOS patients and 53 control women. These samples were recruited from Fertility Medical Center at CHA General Hospital. All PCOS patients revealed variable symptoms of PCOS including hyperandrogenism, polycystic ovaries and oligomenorrhea. All control women had normal menstrual cycles and no clinical evidences of PCOS. Whole blood samples were obtained during the follicular phase of menstrual cycle from both PCOS patients and control women, and genomic DNA was extracted and purified from blood samples. After genotyping assay, we calculated frequencies of three genotypes and analyzed the association between the polymorphism of *SORBS1* and PCOS by HapAnalyzer (NGRI, Seoul, Korea).

Results: Frequency of AA genotype for *SORBS1* gene in control group was higher than in patient group (patient group = 74.52%, control group = 83.02%). Interestingly, the rate of AG genotype was higher in patient group than in control group (patient = 24.52%, control = 15.09%). However, after association study, we found that p-value was 0.1978 and that value was in a non-significant range.

Conclusions: The result suggests that the A/G polymorphism in the *SORBS1* gene is not tightly associated with PCOS in Korean women.

Key words: PCOS, RFLP, SNP, SORBS1