

P-40 **The Pregnancy Rate Following Myomectomy in Infertile Women**

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Introduction: To evaluate the efficacy of transabdominal myomectomy in the management of infertile women with no other detectable cause except myomas.

Materials and Methods: The medical records of 38 infertile patients who have undertaken transabdominal myomectomy at the Department of Obstetrics and Gynecology, Yonsei University from 1990 to 1996 were reviewed.

Results: Overall 36.8% of the infertile women conceived after myomectomy. Patients with less than 4 years of infertility, younger than 35 years of age, and with a solitary uterine myoma had a statistically higher incidence of pregnancy ($p < 0.05$).

Conclusion: Myomectomy can be strongly recommended to improve the pregnancy rate of the infertile women with no other detectable causes of infertility. Factors affecting the pregnancy rate after myomectomy were the age of the women, duration of infertility, and the number of myomas present.

P-41 **Polycystic Ovarian Syndrome (PCOS) is a Form of Profound Peripheral Insulin Resistance**

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Objective: Polycystic ovarian syndrome (PCOS) was first noted to be associated with a disorder of insulin action in 1980. And this association of hyperandrogenism and hyperinsulinemia was suggested to have etiological significance.

There were some report that women with PCOS to evaluate the defect in insulin action by euglycemic hyperinsulinemic clamp methods.

Research Design and Methods: The study population consisted of 9 PCOS women, 6 obese type 2 diabetic patients, and 5 controls whose BMI were similar to that of the 9 PCOS women. 75 g oral glucose tolerance test (OGTT) and the hyperinsulinemic euglycemic glucose clamp test were performed. The insulin resistance was determined by the insulin sensitivity index (ISI, glucose disposal rate; mg/kg/min). The clinical characteristics and the metabolic profiles including the ISI were compared among the groups.

Results: PCOS women showed significantly increased insulin responses during OGTT, but their blood glucose were comparable to control. Therefore, their beta-cell seemed to fully com-

pensate for severe insulin resistance. Insulin sensitivity index was significantly decreased in PCOS women compared to normal control and type 2 diabetic patients, and those of type 2 diabetic patients were between PCOS's and control's. The subjects with PCOS had more insulin resistance than other groups. There was no difference among groups in the clinical characteristics and the metabolic profiles except age, LH, testosterone, and SHBG. Other feature of syndrome X, such as hypertriglyceridemia, low HDL cholesterol and hypertension were not seen in PCOS.

Above results demonstrate that insulin resistance, independent of adiposity, is associated with PCOS.

Conclusion: We conclude that PCOS women and type 2 DM patients have significant insulin resistance. Underlying mechanisms of such insulin resistance in PCOS may differ from those associated with type 2 DM patients. Further investigations on cellular and molecular mechanisms of insulin resistance in PCOS is needed.

P-42 내분비장애물질인 Octylphenol이 생쥐 Preantral Follicle에서 Cytochrome P450 Cholesterol Side-Chain Cleavage Enzyme 유전자의 발현에 미치는 영향

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동물이나 사람의 체내에 들어가서 호르몬의 작용을 방해하거나 혼란시키는 물질을 내분비 장애물질 (Endocrine disrupter)이라고 한다. 이러한 내분비 장애물질은 화학적 구조가 생체호르몬과 유사하여 체내에서 마치 정상적인 호르몬인 것처럼 작용을 하게 된다. 이러한 내분비 장애물질은 생식기능저하, 기형유발, 성장장애, 호르몬 분비의 불균형, 면역기능저하, 암 등을 유발시키는 것으로 추정되고 있다. 기존에 보고되어 있는 내분비 장애물질 중 Phenol류는 플라스틱 제품에 포함되어 있으며, 식품과 음료에서도 검출되는 것으로 보고되고 있다. 그리고 이러한 물질은 생식기능의 저하시키며, 특히 정소발생과 정자형성과정을 방해하는 것으로 알려져 있다. 그렇지만 난소내의 난자형성과정에서 이러한 내분비 장애물질이 미치는 영향에 대한 보고는 전무한 실정이다. 이에 본 연구는 phenol계 내분비 장애물질인 Octylphenol이 난포의 성장과정에 미치는 영향을 알아보고자, 생쥐 preantral follicle을 체외배양시 octylphenol의 첨가가 steroid호르몬의 생합성에 관여하는 cytochrome P450 cholesterol side-chain cleavage enzyme (P450scc) mRNA의 발현에 미치는 영향을 조사하였다.

Preantral follicles은 12일령 생쥐 (ICR)의 난소로부터 collagenase와 DNase I을 이용한 enzyme digestion방법으로 회수하였다. 회수된 follicles은 5% FBS와 100 mIU/ml FSH가 첨가된 α MEM배양액을 기본배양액으로 하고, octylphenol을 농도별로 첨가하여 culture plate에서 2일간 배양을 실시하였다. 첨가된 octylphenol의 농도는 1 pM, 1 nM 그리고 1 μ M이었다. P450scc mRNA의 발현양상을 확인하기 위해서는 RT-PCR방법을 이용하였으며, band intensity를 측정하여 대조군과 처리군들 간의 발현정도를 비교분석하였다.

연구의 결과로서, P450scc mRNA의 발현은 대조군과 모든 octylphenol처리군들에서 확인할 수 있었다. 그렇지만, P450scc mRNA의 발현정도는 octylphenol의 처리농도가 증가함에