

stimulation of the specific gene expression affecting positively to the microenvironment of uterus.

## P-10 Effect of Ethane Dimethane Sulfonate (EDS) on the Epididymal Apoptosis in Male Rat

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**Background & Objectives:** Ethane dimethane sulfonate (EDS), a Leydig cell specific toxicant, has been widely used to create the reversible testosterone withdrawal rat model. The maintenance of epididymal structure and function is dependent on testosterone. EDS model shown that testosterone withdrawal from the rat testis results in increased epididymal apoptosis. However, the mechanism by which EDS stimulates cell death remains unknown. The aim of present study was to monitor the apoptosis and reproduction related gene expression profiles in epididymis up to 7 weeks after EDS injection.

**Method:** Adult male rats (350~400 g) were injected with a single does of EDS (75 mg/kg i.p.) and sacrificed on weeks 0, 1, 2, 3, 4, 5, 6 and 7. The transcriptional activities of the genes responsible for apoptosis were evaluated by semi-quantitative RT-PCRs.

**Results:** The transcript levels of both estrogen receptor alpha (ER $\alpha$ ) and estrogen receptor beta (ER $\beta$ ) were higher than control level on week 1. The aromatase receptor (AR) message level increased significantly weeks 1 and 2, then returned to control level on week 3. In contrast, expression of cytochrome P450 aromatase (P450arom) decreased significantly during weeks 1~3, then went back to control level on week 4. The mRNA level of Fas ligand increased significantly during 1~2 weeks, then returned to control level on week 3. Similarly, Fas receptor message increased significantly during 1~3 weeks, then reverted to control level on week 3. Expression of Bax significantly increased on week 7 while Bcl-2 expression decreased significantly on the same week.

**Conclusions:** The present study clearly indicated that EDS treatment induced epididymal apoptosis. Epididymal apoptosis would appear to be mediated through the actions of the Fas receptor and its ligand, which are both up-regulated after EDS administration. In contrast, the Bcl-2 family of proteins does not appear to play an initiating role in epididymal apoptosis. In conclusion, EDS injection model might be useful to understand the apoptosis mechanism of germ cells and somatic cell in male reproductive organs.

## P-11 Ovarian Reserve after Removal of Ovarian Tumor

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**Background & Objectives:** 가임기 여성에서 난소종양 제거술 후 난소 배란능의 변화를 예측하기 위