

## **Effects of Testosterone on the Expression of Connexin 26 and Connexin 43 in the Uterus of Rats During Early Pregnancy**

### **ABSTRACT**

Background/Aim: It was hypothesized that testosterone could affect the distribution and expression of connexin 26 and connexin 43 in the uterus. Thus, the effects of testosterone on these parameters in the uterus during the uterine receptivity period were investigated. Materials and Methods: Intact pregnant rats were administered 1 mg/kg/day testosterone alone or in combination with flutamide, finasteride or anastrozole, subcutaneously on day1 of pregnancy till day 3. The rats were sacrificed at day 4 of pregnancy, which was considered as the uterine receptivity period for determining the expression and distribution of connexin 26 and connexin 43 by immunohistochemistry and quantitative polymerase chain reaction, respectively. Results: Treatment with 1 mg/kg/day testosterone increased connexin 26 and decreased connexin 43 mRNA expression and protein distribution in the uterus of early pregnancy rats. Conclusion: Changes in the uterine connexin 26 and connexin 43 expression by testosterone could disrupt embryo implantation, resulting in early pregnancy loss.