

# **FOLLICULAR GROWTH IN ANDROGENIZED RATS IN RESPONSE TO GONADOTRPHIN ADMINISTRATION.**

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## **Abstract Body**

### **Introduction**

Exposure to androgens during early postnatal life is able to induce the formation of ovary cyst and anovulation. Its effects have been associated to changes in the pattern of pulsatile release of gonadotrophins, however we postulate an direct effect on ovary. Thus, in this study aimed to revise the follicular ovary response to gonadotrophins in ovaries of pubertal rats with neonatal androgenization.

### **Materials and methods**

Androgenized (Testosterone or DHT) neonatal Wistar rats (PND1-PND5) were stimulated with 8 IU PMSG or PMSG followed 48 hrs after with 8IU hCG at 26 days old. Ovaries were dissected, fixed with formalin, embedded in paraffin and stain with Hematoxylin-eosin. Sections (5 µm thick) were obtained and every 5a.section was photographed and a morphometric analysis of follicles was performed using Image J program. A group of ovaries from non androgenized prepubertal rats at same ages were treated with gonadotrophins and used as control.

### **Results**

PMSG treatment induces a bigger follicular recruitment in ovaries with neonatal testosterone administration, follicles reached a size  $\geq 450$  µm. Both number and follicular size in testosterone group were greater than those observed in control or DHT groups. In spite of increased follicular size in testosterone group, no ovulation was registered after hCG administration, meanwhile DHT and control animals ovulated. Morphological observation of big follicles in neonatal testosterone treated rats showed a cyst appearance with engrossed theca and granulose layers. In some cases granulose cells with luteal appearance were registered.

### **Conclusions**

Our work shows that neonatal androgenization with testosterone modifies the follicular response to ovulatory doses of gonadotrophins; inducing a accelerate growth without a adequate response to LH.

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