

***Protective Effect of Antioxidants on Ischemia Reperfusion
Injury of Rat's Ovary- Histological &
Immunohistochemical Study***

Thesis

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ABSTRACT

The present work aimed to study the possible histological and immunohistochemical changes that occur due to ischemia reperfusion injury of rat's ovary and possible protective effect of vitamin c as antioxidants . Thirty five female rats were randomized into 7 groups. group 1: control, group 2: control given vitamin c for 2 weeks, group 3: ischemia only for 4 hours , group 4: ischemia 4 hours then reperfusion 1 hour group 5: ischemia 4 hours then reperfusion two weeks, recovery group 6: ischemia 4 hours then vitamin c injected intra venous 50mg/kg then reperfusion 1 hour group 7: ischemia 4 hours then vitamin c injected intra venous 50mg/kg then reperfusion 2 weeks as recovery

The animals were sacrificed after 5 hours for groups 1,3,4,6 and 2 weeks for group 2,5, 7 from the start of the experiment. Specimens were fixed immediately in 10% buffered formalin for histological and immunohistochemical studies. Image analysis and statistical analysis of the obtained results were performed.

Groups 3,4,5 . There were decrease in number and development of follicle when compared to control groups 1,2 respectively but there were increased collagen accumulation ,and strong +ve reaction to p53 in ovarian follicle and stroma when compared with control groups.

However on groups 6,7, that vitamin c was used as antioxidant showed almost normal ovary similar to control group 1,2 respectively as regards number and development of follicle and with less collagen and less +ve reaction to p53 when compared to control groups.

It was concluded that using vitamin c as antioxidant protected the ovary from damage that result from free radical of ischemia reperfusion

Keywords: ovary, ischemia, immunohistochemistry, reperfusion, antioxidant, vitamin c.