9th Yazd International Congress and Student Award on Reproductive Medicine with 4th Congress of Reproductive Genetics

Poster Presentations

P-67

Evaluation the remote organ functions in polycystic ovary syndrome-induced by estradiol valerat in rats

Abdi A, Seifi B, Kadkhodaee M, Asadi B, Vaziripour M.
Department of Physiology, School of Medicine, Tehran University of Medical Sciences, Tehran, Iran.
Email: a-abdi@razi.tums.ac.ir

Background: Polycystic ovarian syndrome (PCOS), Metabolic and heterogeneous disorder, prevalence in women between 5-10%. PCOS presents itself by a numerous clinical manifestation that may affect remote organs such as brain, liver and kidney as well as ovaries.

Objective: The main aim of this study is to investigate the effects of PCOS on remote organs (brain, liver, and kidney).

Materials and Methods: Twelve female rats were randomly assigned to 2 experimental groups: 1) Sham and 2) PCOS. In the Sham group PCOS induction was not performed. In the PCOS group animals received 4 mg/kg estradiol valerate in 0/2 mg sesame oil as a single dose intra muscular. After 31 days, animals were anesthetized and blood, liver, and brain tissues were collected for evaluation of kidney function markers, Urea and plasma creatinine, and liver enzymes, Alanine transaminase and Aspartate transaminase, and measurement of oxidative stress (Malondialdehyde and superoxide dismutase) in liver and brain.

Results: PCOS altered kidney function and liver enzymes significantly as well as the oxidative stress markers in liver and brain as malondialdehyde levels increased and superoxide dismutase activity decreased.

Conclusion: The current study showed that PCOS may affect other organs like kidney, liver, and brain via oxidative stress. Thus notice to remote organs in PCOS is as important as reproductive organs.

Key words: *PCOS, Oxidative stress, Remote organs, Brain, Liver.*