

MORPHOLOGICAL CHANGES OF OVARIES UNDER THE INFLUENCE OF LEAD ACETATE AND THEIR RELATIONS WITH BIOCHEMICAL CHANGES IN THE EXPERIMENT

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Introduction. Lead as an environmental pollutant and toxic agent remains to be in the center of attention of specialist from different areas of medicine and biology.

The aim of work was to study the effect of different doses of lead acetate (LA) on the biochemical parameters and morphological picture of the ovaries in the experiment.

Materials and methods. The study was carried out on 40 nonlinear female rats divided into 4 experimental groups: I – control group, II group – rats that during 30 days drink LA solution in the dose of 0,05 mg/kg of the body weight, III and IV group – dose of 10 mg/kg and 60 mg/kg, respectively. The blood of animals and ovaries were taken for histological and biochemical examination.

Results. It was determined, that LA caused activation of peroxidation of lipids and proteins in the rats, which is directly dependent on the dose of lead. In response to the activation of free radical oxidation there were changes in the antioxidant system, which depend on the dose of LA: at a dose of 0.05 mg/kg superoxide dismutase and catalase activity were increase, at a dose of 60 mg/kg superoxide dismutase and catalase activity significantly decreased.

Morphological examination showed that structural components of ovary cortex and medulla were changed: moderately increased blood

supply of the cortex and medulla was found in the ovaries of animals given low doses of LA. Analysis of the state of follicles in the cortex of the ovaries showed that in group IV animals, there was a slight increase in the number of primordial follicles in non-ovulating ovaries, increase in tunica albuginea thickness, slight decrease in atretic follicles, the number of follicles in the cortex at all stages of their growth and development were decreased.

Conclusion. Small doses of lead did not cause the development of endogenous intoxication, in contrast to high doses, which increased the formation of toxic compounds.