

E.A.Nefedova

State institution
“Dnipropetrovsk
medical academy of
the Ministry of Health
of Ukraine”

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BIOANTAGONISTIC ACTION OF SILVER CITRATE AND GOLD CITRATE TO THE CARDIOTOXICITY OF LEAD ACETATE IN RAT EMBRYOS

The study was conducted as a part of research work “Development and morphofunctional status of organs and tissues of experimental animals and humans in norm, during ontogenesis, under the influence of external factors” (state registration number 0111U009598).

ABSTRACT. Background. Pressing problem for the industrial regions of Ukraine are heavy metal pollution, with priority toxicants which is lead and its compounds. Search for new bioantagonism possible lead compounds - a task relevant (important) to modern medicine. **Objective.** The aim of the study was to determine the experimental morphogenetic effects of patterns of isolated impact of lead acetate and lead acetate combined action of gold citrate and silver citrate to heart development of the embryos of rats. **Methods.** The study conducted on embryos of white rats. In the experiment, there were 4 groups of animals: control group isolated administration of lead acetate group and the combined administration of lead acetate and gold citrate and silver citrate. **Results.** Experimental results showed cardiotoxicity of lead acetate, which was determined to reduce the thickness of the compact myocardium wall ventricle of the heart, reducing thickness fibrillation, ventricular septal thinning. Violation of delamination processes and ventricular myocardium compaction under the influence isolated lead acetate manifest violation of the trabecular layer formation and the formation of ventricular myocardium atrioventricular valve holes: shortening valves, change the content and scope of the atrioventricular valves accompanied by the formation of additional anomalous tendon strings. The influence on the course of cardiogenesis in groups with combined effects of lead acetate and citrate gold and silver citrate showed recovery of myocardial thickness and ventricular fibrillation, no violations in the formation of valvular heart rat embryos, indicating a decrease in cardiac toxicity of lead acetate citrate metals during combined administration. **Conclusion.** Introduction citrate solutions of gold, silver citrate prevents the negative effect of lead acetate on the general course of processes of cardiogenesis of embryos of rats under experimental conditions and indicates their bioantagonism. The most pronounced bioantagonism to lead acetate observed in the group combined effects of lead acetate and citrate gold.

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