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THE INFLUENCE OF XENOBIOTICS ON THE METABOLISM OF COPPER IN THE EXPERIMENT ON WARM-BLOODED ANIMALS

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The relevance of the topic: a Study of the influence of surface-active substances, providing xenobiotic effects on the balance of trace elements the body warm-blooded animals, do many scientists. According to many authors, it is sufficient informative element to characterize the changes occurring in the body animals and humans under the influence of foreign substances, is the trace element copper. Biological properties of copper refer to a number of essential micronutrients the lack of which in the body leads to very considerable disturbances in metabolism The mutual influence of trace elements in the composition of biological objects especially in the condition of the action of the foreign substances that can lead to changes in the structural units of the body.

Research methods. The work studied the content of trace elements of copper in the heart, liver, kidney, adrenal, spleen, blood serum of adult rats (males) Wistar rats exposed to new groups of xenobiotics in the subacute experience.

The results obtained. The results of experiments showed that the xenobiotics, acting on the body, lead is mainly to the redistribution of the trace mineral copper in the organs and tissues of the experimental animals. Discovered a significant increase of metal ion under exposure dose 1/10 LD surfactants origin 15.9% in the adrenal glands and by 10.9% under the influence of anionic substances type in the same dose, which may be due to immobilization of the protective mechanisms of the body animals.

Conclusions. Dose of 1/1000 LD is not current. This confirms the existence of a complex of interrelated mechanisms reduction and redistribution of trace elements in organs and tissues under the influence of xenobiotics.

FEATURES OF THE STRUCTURE OF HEART

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Introduction. Knowledge of century features of a structure of heart of newborns is necessary for diagnostics and treatment of defects of heart, in connection with the high level of birth rate of children with defects of heart. Congenital heart diseases meet frequency of 6-8 cases on each one thousand childbirth which represents 30% of all defects of development. They win first place on mortality of newborns and children of the first year of life.

The purpose of this work is studying of features of a structure of heart at newborns.

Research materials: it was investigated the 8th hearts of newborns (4 hearts of the boy, 4 hearts of girls).

Result of a research. We defined that the weight of heart of the newborn: boys on average have 23 g, girls have 21 g. Position of heart in a chest cavity in newborns is higher, than at adults: its diameter represents a half of the cross size of a thorax. Cross diameter equals longitudinal, or exceeds it (it is connected with insufficient development of ventricles and rather big sizes peredserd). Auricle ears rather big, cover the heart basis. Grudino-reberna a surface is formed by the right auricle, the right ventricle and rather most part of the left ventricle. The vilochkova of iron adjoins to a forward surface of the right auricle. Only ventricles face a thorax. The top of heart is rounded. The right ventricle which in the pre-natal period functionally prevails has big capacity, than left. Thickness of walls at both ventricles is identical and represents 5 mm After the birth the left ventricle begins to prevail functionally, and from the 5th day of life of the child the weight of walls of the left ventricle becomes more, than the weight of walls of the right ventricle. At the time of the birth, after cutting of an umbilical cord, a linking of a fruit with a body of mother it is broken, and after the first breath easy and their vessels finish that leads to the beginning of functioning of a small circle of blood circulation.