pronounced perivascular lymphoid infiltration along the periphery of the organ indicates the activation of protective processes at the local level. Sinusoids are wide with a large number of Kupffer cells. There are hepatocytes with very large nuclei and binuclear, as a consequence of the manifestations of compensatory regeneration processes, as well as with a rather depressed chromatin. Some cores are incorrectly oval, which can be observed with initial karyopicnosis and before cell death. In the kidneys in the proximal convoluted tubules, the epithelium is flattened, in some places, the apical poles of the cells are deformed, the nuclei are lysed. Crimped tubules have a destroyed upper part. There are very large hypertrophied glomeruli. Many macrophages. The glomeruli are irregular in shape. In the brain, the number of neurons is reduced. They have a hyperchromic core. Glial cells, neurons with signs of fragmentation, dominate. There is neuronal death, pronounced edema of the neuroglia. Also, the process of thrombus formation in capillaries is visible.

Conclusion. An analysis of the morphological studies of organs of white rats suggests that in the state of internal organs, marked morphological changes are observed under the influence of ethylene oxide and propylene oxide at a dose of 1/10 DL50, which can affect the functioning of the head moss, liver, and kidneys.

Bezrodnaya A., Mbonu F., Aladetoyinbo A.

INVESTIGATION OF ENZYME ACTIVITY UNDER THE CONDITIONS OF INFLUENCE OF SURFACE-ACTIVE SUBSTANCES IN RATS IN THE SUBACUTE TOXICOLOGICAL EXPERIMENT

Kharkiv national medical university
Department of Biological Chemistry
Kharkiv, Ukraine
Research advisor: prof. Nakonechna O.A.

Introduction. In connection with the wide use of surfactants in all spheres of vital activity of modern society, there is an undeniable threat of their negative influence on the metabolism, which is provided by enzymes. Alpha-amylase is one of the enzymes of the digestive system, which is synthesized mainly by pancreatic cells of the exocrine type and is responsible for the cleavage of complex carbohydrate components of food, starch and glycogen to simple carbohydrates (glucose). The key enzyme of anaerobic glycolysis is lactate dehydrogenase (LDH), which catalyzes the oxidation of lactic acid to pyruvate. Alkaline phosphatase is an enzyme-hydrolase that cleaves phosphate from many types of molecules, for example, nucleotides, proteins and alkaloids. Aim - determine the activity of alpha-amylase, lactate dehydrogenase and alkaline phosphatase in the blood of white rats under the influence of polypropylene glycol in a dose of 1/10 DL50.

Materials and methods. A subacute toxicological experiment was carried out in two groups of animals: control and experimental in the number of 10 white rats of the WAG population of both

sexes in each aged 6-8 months. Aqueous solutions of polypropylene glycol daily on an empty stomach were intravenously administered 45 days at a dose of 1/10 DL50 with a metal probe. The control group of rats received the corresponding volumes of drinking water. The activity of alpha-amylase, lactate dehydrogenase, alkaline phosphatase was carried out after the subacute toxification on the 45th day of the experiment on the biochemical analyzer "Lab Line-80" (Austria) with the help of reagent kits of the firm "Filisit-Diagnostika" (Ukraine).

Results. In the group of animals, PPG toxicity, analysis of enzyme activity in the blood showed that the activity of alpha-amylase in animals was 423.5 ± 36.9 mg / (s Ч l). In comparison with the control group of animals, the activity of alpha-amylase increased by 1.2 times. The activity of LDH in the serum of experimental animals was 225.4 ± 18.9 U / L and increased 1.6 times when exposed to PPG at a dose of 1/10 DL50, which indicates a violation of the integrity of cell membranes by organ-specific enzymes of organs, myocardium, and kidneys. The activity of alkaline phosphatase in the blood serum was 40.5 ± 3.1 nmol / s * l, increased by 1.4 times compared with the activity of this enzyme in the control group of rats exposed to PPH at a dose of 1/10 DL50.

Conclusion. It was found that during the subacute toxicological experiment in rats, polypropylene glycol at a dose of 1/10 DL50 increases the activity of alkaline phosphatase, alpha-amylase, lactate dehydrogenase in the blood of rats compared to the control group of animals, which shows structural and functional disorders of cell membranes of specific organs.

Boiagina O.

INFLUENCE OF CRANIOMETRIC INDICATORS OF THE NEUROCRANIUM ON THE CORPUS CALLOSUM SHAPE OF PEOPLE OF THE SECOND PERIOD OF THE MATURE AGE

Kharkiv national medical university
Department of Human Anatomy
Kharkiv, Ukraine
Research advisor: prof. Kostilenko Yu.P.

Introduction. It is a common knowledge that the form and mass of the brain within the permissible limits can be judged by the shape and capacity of the cerebral cranium, since they are formed in the process of development in close unity with each other. However, in the literature there is no data on the form of the relationship between the corpus callosum and craniometric parameters.

Aim. To establish the influence of the craniometric parameters of the neurocranium on the shape of the corpus callosum of people.

Matherials and methods. The material used was two samples from a series of head MR-tomograms of healthy men and women of the second period of mature age executed in the sagittal plane in the T1 and T2 modes of weighted images (5 mm thick).