years. The mean age of patients with meningiomas was 62.0 (95% CI = 60.1–63.9) years. The oldest patient was found with glioblastoma diagnosis – 91 years old. The youngest patient was 20 years old with diagnosis anaplastic astrocytoma.

**Conclusions**

1) The most frequent tumor in surgical material is meningioma.
2) Glial tumors mostly are high-grade neoplasms (grade IV) with common localization in frontal and temporal lobes.
3) The highest mean age was found in patients with meningiomas and the lowest mean age in patients with pilocytic astrocytomas.

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**MORPHOLOGY STUDY OF SPINAL GANGLIA IN CONDITIONS OF MICROMERCURIALISM AND ITS CORRECTION WITH MILDRONAT**

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**Keywords.** Rat, mercury chloride, micromercurialism, spinal ganglia, Unitiol, Mildronat.

**Introduction.** All humans are exposed to some level of mercury, which is toxic to the central and peripheral nervous systems, causing a condition known as micromercurialism. Mildronat is a clinically used anti-ischemic drug that is currently widely produced in Latvia and other CIS countries.

**Aims.** Study of influence of Mildronat on spinal ganglia in conditions of micromercurialism.

**Materials and methods.** The study was conducted on 80 pairs of white Wistar rats with the weight of 160–180 g. Laboratory animals were divided into 5 series, and each series was divided into 2 groups. In the 1st series were intact animals, in the 2nd – animals that were exposed to mercury chloride in the dose 1/100 LD50 intraperitoneally in the amount of 10 injections during 2 weeks and 50 injections during 10 weeks. In the 3rd and 4th series after exposure to mercury chloride animals received Unitiol and Mildronat respectively intraperitoneally (0.1 ml of 5% solution per 1 kg of weight) during 2 and 10 weeks. In the 5th series after exposure to mercury chloride animals received Unitiol and Mildronat together. All procedures were performed according to “Principles of use of laboratory animals in biomedical research”. The objects of study were afferent neurons and their surroundings in spinal ganglia. Ultrathin sections were made from small fragments of spinal ganglia according to general methods and were photographed by electron microscope.

**Results.** Ultramicroscopic characteristics of sensory ganglia show that after 6 weeks of exposure to small doses of mercury, a combination of Unitiol and Mildronat promotes energy-generating and synthesis processes (repair of the organization of endoplasmic reticulum and mitochondria, amount of euchromatine and nuclear pores of neurons and neurolemmocytes increased). In long-term exposure, a significant decrease in decompensation changes occurs (preservation of synthesis organelles structural organization, large mitochondria in neurons and gliocytes are seen, nuclei of neurocytes and endotheliocytes have a large number of pores, organization of the majority of myelinated nerve fibers is preserved).
Conclusions. Analysis of structural changes in sensory ganglia in mercury exposure shows that injection of the complex of Unithiol and Mildronat eliminates the appearance of mercury toxic effects in short-term exposure to greater extent than in long-term exposure. Morphological conditions improve or resemble the ones in monoprotection using Unithiol and are significantly better than in use of Mildronate only, which shows their mutual compensation effect.

THE MORPHOFUNCTIONAL CHANGES IN THE SUBENDOTHELIAL LAYER OF VARICOSE VEINS

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Keywords. Chronic venous disease, fibronectin, laminin, varicose veins.

Introduction. Varicose veins are a common venous disease of the lower extremity. Although the mechanisms and determinants in the development of varicosities are not clearly defined, the final common pathway that leads to chronic venous insufficiency is the development of venous hypertension. The increase in venous pressure is associated with servile changes in the venous wall that leads to further venous dilation.

The aim of this study was to clarify histological changes and evaluate the expression of basal lamina components (collagen IV, laminin and fibronectin) on great saphenous veins in chronic venous insufficiency.

Material and methods. A histopathological study was conducted on 10 patients with varicose veins (2 males, 8 females). In 9 cases patients had leg oedema (CEAP class 3) and 1 patient had skin changes (CEAP class 4). All underwent lower extremity primary varicose great saphenous vein excision. Tissues were processed for histological routine staining and immunohistochemical studies of collagen IV, laminin and fibronectin. For the analysis of the positive structures semiquantitative evaluation method was used.

Results. Light microscopic examination revealed significant disorganization of the smooth muscle (SM) bundles in almost all specimens, where cells appeared elliptical rather than spindle-shaped (contractile phenotype). The highest density of vasa vasorum was found in the tunica media and tunica adventitia in 8 out of 10 specimens, simultaneously to the sclerotic blood vessels in 6 out of 10 specimens and neoangiogenesis in 8 out of 10 specimens. Immunostaining showed numerous (+++) expression of collagen IV below endothelial cells of vasa vasorum and moderate (++) below varicosed vein endothelium. Also numerous (+++) amount of laminin positive structures and numerous (++++) amount of fibronectin positive structures was found in varicose veins walls below the endothelial lining.

Conclusions. Varicose veins demonstrate ischemia and remodelation of the wall with compensatory neoangiogenesis. Collagen IV, laminin and fibronectin accumulation proves thickening of basal lamina and intimal changes in damaged blood vessels. The thickened basal lamina can be considered as a protective mechanism against high mechanical stress.