

CHARACTERISTIC ASPECTS OF STRUCTURAL CHANGES IN BRAIN NEURONS IN CHRONIC ISCHEMIC HEART DISEASE

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Relevance. Coronary heart disease is one of the most pressing problems facing medicine worldwide today. Despite modern achievements in the prevention and treatment of cardiovascular diseases, coronary heart disease still occupies one of the leading positions. In developed countries, deaths from this disease account for 1/3 of all deaths. More than 1 million people die from this disease every year. Changes in brain structures in chronic coronary heart disease remain one of the pressing problems facing medicine, which has not been fully elucidated to this day and is awaiting a solution.

Research objective: Determination of structural changes in brain neurons in chronic ischemic heart disease.

Materials and methods: tissue fragments from the brains of 28 patients admitted to the multidisciplinary clinic of the Samaraqand State Medical University were studied in the department of pathological anatomy. When assessing the morphological and morphometric changes of brain neuron structures in relation to chronic ischemic heart disease, anamnestic, macroscopic, microscopic, morphometric and statistical research methods were carried out.

Results and discussion: The results of the research conducted show that, In patients who died of chronic ischemic heart disease, ischemic-type changes are observed in neurons in the superficial layers of the cerebral cortex. The nuclei of these cells are visible in the image with a pyknotic and eccentric arrangement. We can see that the axons of neurons are thin and long, extending to a considerable distance from the neuron body. i.e. they can be seen at a very long distance from the cell body. In the deep layers of the cerebral cortex, neurons with hydropic dystrophy are found. The development of narrow pericellular spaces around many neurons and gliocytes is noted. In some areas of the visual field, the pericellular space around neurons in the cerebral cortex is enlarged. In this area, most neurons are round in shape and are in a state of hyperchromasia. The nucleus of some neurons is not detected in the field of vision due to the advanced process of karyolysis. The illumination of the neuropil is determined. In these areas, the number of gliocytes is markedly reduced. In patients who died from chronic ischemic heart disease, karyocytolysis is detected against the background of the development of hydropic dystrophy in the cytoplasm of neurons in the deep layers of the cortex of the cerebral hemispheres. The expansion of the pericellular space around many neurons is noted. Dystrophic changes of neurons are detected in some drugs, and the number of gliocytes is reduced. It is observed that the illumination of the neuropil is increased.

Conclusion: Thus, in chronic ischemic heart disease, ischemic and dystrophic changes develop in neurons in the cortex of the cerebral hemispheres. Also, varying degrees of expansion of the pericellular space and lightening of the neuropil are noted. Such changes should be taken into account in the prevention and treatment of chronic ischemic heart disease.

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