

ОСОБЕННОСТИ МЕЖПОЛУШАРНОЙ АСИММЕТРИИ ПРЕЦЕНТРАЛЬНОЙ ИЗВИЛИНЫ ГОЛОВНОГО МОЗГА ЧЕЛОВЕКА

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FEATURES OF INTERHEMISPHERIC ASSYMETRY OF PRECENTRAL GYRUS OF HUMAN BRAIN

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Investigation of the features of functional asymmetry of the human brain is a very important general scientific problem, which is currently being developed by neurologists, physiology, genetics, etc. Functional asymmetry of the brain characterizes non-uniform distribution of various functions between the right and left hemispheres. All people have one of the hemispheres of the brain is dominant over the other, and so the people are divided on two unequal parts: the left hemispheric and right hemispheric people.

Researching purpose was to identify the asymmetry of the left and right hemispheres of the cerebral cortex, namely, precentral gyrus, as well as study the quantitative changes in the neuroglial-capillary ratio in the hemispheres. The study was performed on serial sections of human cerebral cortex. 160 cerebral hemispheres were investigated. For the study we took fragments precentral gyrus of the right and left hemispheres, namely, the middle parts. It is a motor zone of cortex. Morphometric study is carried out on histological sections of 5-7mkm thick. Coloring of histological sections was performed by Nissl and hematoxylin-eosin. In each field of view of left and right hemispheres of the third and fifth layers of the brain we calculated mean number of neurons, glial cells, and capillaries. There were applied statistical methods for data processing. In studies of middle part of precentral gyrus of both hemispheres we revealed asymmetry consisting of quantitative relation of cellular elements and capillaries in cortex of human brain. This helps us to explain the individual nature of clinical disorders with cardiovascular and neurodegenerative diseases of the human brain.

Thus, when the comparative characteristics of the left and right hemispheres were found, we found out that in the third and fifth layers of the left hemisphere mean number of neurons, glial cells, and capillaries larger than in the same layers of the right hemisphere of the human brain. Consequently, the left hemisphere of right-handed people is more developed than the left-handed.