

Особенности строения предцентральной извилины головного мозга человека при половом диморфизме

Рыженкова И.В., Лобко Я.И.

Кафедра анатомии человека

Харьковский Национальный Медицинский Университет

Харьков, Украина

Morphofunctional peculiarities of the precentral gyrus structure of the human brain during sexual dimorphism

I.V. Ryzhenkova, Ya. I. Lobko

Human anatomy department

Kharkov National Medical University

Kharkov, Ukraine

Study of characteristics and morphology of the cellular structure of the cerebral cortex is an urgent problem in modern medicine. A great interest is presented by studying of different stages of ontogenesis and its neurodynamic features. Precentral gyrus is a key structure of the pyramidal system of the brain. Particular attention is paid to the issue of sexual dimorphism in the human brain. Sexual dimorphism in structural asymmetry indicates the morphological features of the brain in men and women. The aim of the study was to identify sexual dimorphism hemispheres of the human brain.

For studying of the fragments were taken precentral gyrus of the right and left hemispheres, namely the average of its parts - precentral motor cortex. There were using special methods of statistical analysis for processing the data, including: morphological and morphometric methods.

In the study the middle department of precentral gyrus of the brain we made the following conclusions: men with increasing age have the number of neurons in the third layer of the cerebral hemispheres is reduced, the number of glial cells increases, the number of capillaries decreases, in the fifth layer of precentral gyrus age-related changes are marked that similar to ones in the third layer.

In women age-related changes are detected by the neuron- glial - capillary elements of precentral gyrus of both the right and left hemispheres of the brain similar to those described in men. Sexual feature is only quantify these changes. From research we leant that men has the least impact on the change of neuron- glial - capillary interrelations of the third and fifth layers of precentral gyrus of the brain, also found that men average number of neurons, glial cells and capillaries in the field of view is greater than women one.

Thus, in men with increasing age the number of neurons and capillaries of the third and fifth layers of the cerebral cortex of the right and left hemisphere decreases, while the number of glial

cells increases both the right and the left hemisphere. In women we found changes of neuron-glia-capillary elements of precentral gyrus of both the right and left hemispheres of the brain similar to those described in men ones. Sexual feature is to quantify these changes.