

THE PECULIARITIES OF MACRO- AND MICROMORPHOLOGY OF SPINAL CORD AND SPINAL CORD UNITS IN POULTRY

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The research shows macro- and microstructure of spinal cord and spinal cord units in poultry. It has been analyzed the results of experiments and their ratio with data. The histologic structure of research organs in poultry is similar to the other species of animals by analogy. But in the functional ratio the tissue of the organs is built by nerve cells and nerve fiber and has differences in structure.

The investigations conducted show that the neurons are allocated irregularly and different by their function in grey matter of the central part of spinal cord. They form cluster nuclei – ventral, lateral and dorsal horns. Moreover, spinal cord units have round form and thickening of dorsal roots of spinal cord. The main element of spinal cord units is a pseudounipolar neuron. The perikaryons of neurons have an oval form with outlined cytoplasm.

It has been determined that neurocytoplasm organization of spinal cord and spinal cord units is characterized by formation of large, medium and small nerve cells which are different in morphometric indicators and nucleus cytoplasmic ratio. The morphometric analysis shows the largest number of medium neurons in grey matter of spinal cord ($42.50 \pm 0.37 \%$), small ($29.53 \pm 0.50 \%$) and the least number of populations have large neurons ($27.95 \pm 0.41 \%$).

The neuropopulation of spinal cord units include the cells with perikaryon by volume within 1.152 and 74.955 th. μm^3 , where $42.74 \pm 4.33 \%$ of neurons are within 1.152 and 25.753 th. μm^3 , that compounds small neuron group medium by volume 20.668 ± 5.478 th. μm^3 . The least numerous groups ($20.51 \pm 4.5 \%$) are presented by large nerve cells of perikaryon by volume within 50,354 and 74,955 th. μm^3 . The medium neurons compound $36.75 \pm 7.15 \%$ from the total number of nerve cells by volume 39.261 ± 1.93 th. μm^3 .

With the impregnation of spinal cord and spinal cord units by nitrogen acidic silver the experimented animals have various coloring intensity of nerve cells: light, light and dark, and dark, that is connected with peculiarities of species and aged neuromorphology, morphological and functional state of nervous system and the type of higher nervous activity.

Morphological study, morphometric analysis, nervous system, spinal cord, gray matter, spinal cord units, nerve cells, nucleus, nucleolus