Results. Using of this coloration method the borders of the cortex, cerebellar nuclei and white matter are very clearly defined. The bodies of large and small neurocytes are differentialed exactly. The nucleus of each nerve cell has pronounced contrast and a clear contour, surrounded by more lighter cytoplasm containing small nisslevskuy grains which are coloured brown. Small cells are scattered in the interior of the cerebellar nuclei between the large cells. Dendrites and axons of these cells are coloured light brown, they are short and branch near the dendrites of large neurons. The axons of the cells are covered by myelin in grey matter of the dentate nucleus and give collaterals, branching near the glial cells. The myelin sheathes of nerve fibers are colored in dark-black color and are good visible, making possible to trace the route and direction of a single nerve fiber. Muscular tissue is coloured rich red-brown, which contributes to the high differentiation of the vascular bed. The coats of blood vessels are differentiated by color, red blood cells take dark brown sometimes black colour. Connective tissue is coloured from pink to bright red. The nerve fibres devoid of myelin are coloured brown in the interior of the cerebellar nuclei and on the walls of the capillary bed. A microscopic study of the sections of the dentate nucleus shows an rich network of capillaries and different correlations of the nerve cell and the capillaries.

Conclusion. Comparative analysis of different histological methods of the colouring of the cerebellar nuclei to study their structural organization showed the expedieney of the using histological method "Method of study of nerve fibers in the neurovascular bundles of different tissue structures" (Patent number 65245 from 25.11.2011g.).

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THE MORPHOLOGY OF THE CEREBELLUM OF NOT PEDIGREE WHITE RATS DURING EARLY ONTOGENESIS

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Background. In studies of age-related changes of the physiological systems of the human body in recent years there has been increased interest in the earliest stages of postnatal ontogenesis. According to the physiological state of the newborn animals white rats are related to immature ones. Among the most immature at birth, even in normally birth age, the cerebellum and cerebral cortex are related.

Methods and materials. The observations were made in 10 white rats which were born by 10 female and 3 male rats of the same species in individual cages. Each dropping contained from 9 to 12 rats. The total number of animals involved in the experiment was 98. We used a number of techniques: morphometric, timing, macro-microscopic, histotopografy, histological (hematoxylin and eosin colouring by Nissl), statistical.

Results. The animals were divided into two groups which were called "observation" and "morphological" where the objects to study were the brain and the cerebellum of white rats during early ontogenesis. In the "observation" group the rats

in the number of 14 were included. In the "morphological" group the rats in the number 84 were included. The study was subdivided into two stages. In the first stage the observation and time study of physical activity of the white rats were formed from the first day and during the first month of postnatal life, the weight of the body and size of the rats were determinated. In the second stage of work we measured morphometric parameters of the brain and cerebellum (their sizes, masses were determinated). Weighing was performed twice daily (at 9:00 and 19:00). During the first 22 days of postnatal life of not pedigree rats weight of the brain increased from 7 to 12 days, and the weight of the cerebellum remained evenly over the entire period of observation. To the 22nd day the relative weight of the brain and cerebellum remains at indicators of newborn animals and the end of the formation of the folds of the cerebellar cortex.

Conclusion. It is found that a mature state of motor activity specific to the type of animal is reached to the 22 day.

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THE MORPHOLOGY OF THE THYMUS GLAND IN FETUSES AND NEWBORNS. INNERVATION AND BLOOD SUPPLY

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Methods and materials. The study was conducted on the corpses of 20 fetuses and newborns (5 foetuses and 7 newborns and 8 preparations of the organocomplexes of the head, neck and chest (3 foetuses and 5 newborns)). Morphometric method, macroscopic-microscopic dissection by V.P.Vorobevu, vascular injection technique (using ink-gelatin mixture of red and blue), histological (hematoxylin at Krutsay at Bilshovskomu-Gross) were used.

Results. Full development of thymus gland (TG) is completed by the time of birth. The gland is located in the thoracic cavity in the anterior mediastinum. We have identified three major forms of gland: the leaf-like (80%), conical-like (15%) and horseshoe-like (5%). According to the number of shares we have characterized TG as: one-lobed (5%), bi-lobed (85%) and trilobe (10%).The TG is supplied with blood by main (75%) and accessorial (25%) arteries. Go to the main branches we assigned internal thoracic artery and inferior thyroid artery. (they were present in all the studied preparations and had a relatively large diameter). As accessorial blood vessels we counted the branches of the aortic arch (7%), brachiocephalic trunk (15%), and upper thyroid artery (3%). The cervical and thoracic ganglia of the sympathetic trunk, phrenic and vagus nerves (its parasympathetic fibers) supply TG. A constant source of sympathetic innervation is the middle cervical and star-shaped ganglia.

Conclusion. The structure of TG is characterized by individual anatomical variability and depended by the shape and number of lobes.