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GENERAL CHARACTERISTICS OF THE NERVOUS SYSTEM AND HIGHER NERVOUS ACTIVITY IN CHILDREN.

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Abstract: The nervous system, on the one hand, adapts to the metabolic and physiological processes that pass to various tissues, organs and systems, and on the other hand, with its help, performs the function of maintaining the connection between the whole organism and the external environment. During ontogeny, various parts of the nervous system merge into a functional system, mature and harmonize with age. This article provides information about the general features of the nervous system and higher nervous activity in children.

Key words: Higher nervous activity, central nervous system, pallidum function, lipofucin pigment.

During early childhood, the central nervous system develops very rapidly. According to I. P. Pavlov, the characteristic of higher nervous activity is the synthesis of heredity, factors and educational conditions. 50% of a person's general mental development begins to form at the age of four. 1/3-4-8 years old, the remaining 20% are 8-17 years old. Therefore, the impact of unpleasant factors in early childhood causes serious disorders of the central nervous system. The impact of unpleasant factors can lead to a strong stimulation of the cerebral cortex. After a short-term excitation, its diffuse inhibition appears. The function of the higher layers of the central nervous system is closely related to the activity of receptors, which are peripheral self-receiving mechanisms. Interoreceptors transmit tickling from the internal organs to the cerebral cortex; and exteroreceptors provide tickling through the external environment. The cerebral cortex receives sensory impulses, analyzes and synthesizes them. It is clear from this that the cells of the cerebral cortex of the large hemisphere must be perfectly matured. Due to the insufficient development of the child's nervous system and the cells of the cerebral cortex, the receptive stimulus is functionally insufficient. When the child is related to the environment, he should interact closely with the environment. This balancing is carried out by a number of mechanisms, such as extero- and interoceptors, humoral regulatory systems, then changes in the function of organs and the adaptive-trophic function of the symptomatic sympathetic system. All these mechanisms are directly controlled by the cortex of the brain, the development of complex human behavior and higher nervous activity is entirely related to the brain and partly to its large hemisphere.

The nervous system of newborns and young children differs from other systems in that it is not sufficiently developed and not divided into classes. The brain. In the first period of life in

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the mother's womb (up to the first month), the cerebral cortex is not divided into layers, there are no myelinated nerve fibers. Although almost all brain cells and egates are present in the large hemisphere of the brain of a newborn child, they are very weakly developed; the structure of the layers of the cerebral cortex is mostly completed only at the end of the period in the mother's womb, but the division of all nerve cells into layers occurs mainly in the postembryonic period. At the same time, the structures of the spinal cord, optic nerve (thalamus opticus), on the contrary, are somewhat improved. The shape of the cerebellum is elongated, and its edges are not clearly visible. Only in the first half of the year, the child's brain macroscopically approaches the brain of an adult. The weight of the brain increases rapidly after birth, the weight of the brain of a newborn child is 360-370 grams, that of a 6-month-old child is 600 grams, and at the end of the year it is about 900 grams. The weight of the brain of a newborn child is equal to 1/8 of the weight of the body, and that of an adult is equal to 100 parts. Brain weight increases twice at 9 months, three times between 1 and 3 years of age, and 4-5 times at 20 years of age. The division of brain matter into layers, that is, the development of nerve tissue, ganglion cells, and nerve fibers is somewhat slow. Because in a newborn child, the stratum corneum is divided into few layers and the center of the cortex is not sufficiently developed. The development of the cerebral cortex is especially intense in the first three months after birth. The lack of short branches of dendrites (nerve cells) in nerve cells is very characteristic. The division of nerve cells into layers is mostly completed by the age of 3. At the age of 8, they completely improve. From the moment of birth, the conducting path is sufficiently developed. The pyramidal tracts are surrounded by a myelin membrane in 5-6 months.

Spinal cord. After the birth of the child, the spinal cord weighs 2-6 g, and in the future, it grows somewhat slower than the weight of the brain. The growth of the spinal cord goes hand in hand with the development of motor function; it increases its weight by three ranks at the age of 5, but its difference from the brain is that from the second year its structure approaches the structure of adults. Depending on age, only the number of motor cells of the anterior horn increases. During puberty, the spinal cord increases 4-5 times. When performing a spinal puncture, it should be noted that the lower part of the spinal cord in a newborn child is located at the level of the III lumbar vertebra, and at the age of 4, it is located between the I and II lumbar vertebrae, as in adults. Nerves inside the skull are covered with myelin for up to 3 months, and peripheral nerves for up to 3 years. The autonomic nervous system is active from birth. Thus, the morphological features of the nervous system in early childhood are expressed by the insufficient development of the cerebral cortex, the insufficient separation of nerve cells into layers, and the insufficient wrapping of nerve fibers in the myelin sheath. Accordingly, there are a number of

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features of the nervous system function in childhood. In the embryonic period, in the first half of pregnancy, tickling from a desired point causes a diffuse reaction by the nervous system, and this tendency to diffuse reaction is preserved in newborn children. In the second half of pregnancy, it has been determined that exposure is manifested in a certain place. As long as the pyramidal tracts of the cerebral cortex and the striatal body are not fully developed at birth, the entire life function of the newborn child is regulated mainly by the thalamopallid, that is, the subcortical system. For example, the pallidum regulates motor movement; It is also responsible for the slow, involuntary movements of the fingers and toes that are characteristic of a newborn child. crawling is also linked to the function of the pallidium.

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