INTERCELLULAR CONNECTIONS IN THE BARK OF THE CRANIAL HEMISPHERES . REACTION OF THE CRANIAL HEMISPHERES TO HYPOXIA .ANATOMICAL HISTALOGICAL STRUCTURE

Shaudirboyeva Umida Shahriboyevna
Sobirova Dildora Ravshanbekovna

The cranial hemispheres are the most developed and complex human structures. They control many aspects of brain activity, including cognitive functions, actions, sensitivity, and many other basic processes. Intercellular connections, that is, synaptic connections, located in the cerebral cortex, form the basis of brain work activity. These connections provide information transfer between the cerebral hemispheres and coordination of various functions.

Hypoxia is a condition of oxygen deficiency that can severely disrupt the functioning of brain cells. The cranial hemispheres are very sensitive to hypoxia, as they form the central part of brain activity and respond not only to cognitive processes, but also to physiological reactions. The reactions of hypoxia that occur in the shells of the cranial hemispheres alter the connections of brain cells with each other, and this can alter the characteristics of brain functions.

In this introduction, the role of intercellular connections in the bark of the cranial hemispheres and the importance of studying how hypoxia affects them is discussed. This issue is relevant not only in neurology, but also in clinical medicine, since hypoxia seriously affects the functioning of the brain and the health of a person in general. Keywords: cranial hemispheres, stem, intercellular connections, hypoxia, cognitive function

The vertebrate cranium is made up of two cranial hemispheres, separated by a longitudinal cranial suture. Therefore, we can describe the cranium as divided into the left and right hemispheres. Each of these hemispheres has an outer outer layer of gray matter, while the cranial cortex has an inner layer of white matter below it. In placental mammals, hemispheres are a boxy body with a tuft of very large nerve fibers (lot. corpus callosum).

Hemispheres are also connected using smaller commissures such as the anterior commissura, posterior commissura, and fornix (hump), and this is also found in other vertebrates. These commissures provide information exchange in both hemispheres to coordinate local functions. The cranial hemispheres are known to have three poles: ensa pole, forehead pole, and chakka pole. The central egat is popular, separating the top piece from the forehead piece and the primary actuator piece from the primary somatosensory piece.

Macroscopically, hemispheres are visible in a mirror reflection of nearly each other. Only minor differences, such as the Yakovlev twist seen in a person, are slight right-hand turns that push it further forward relative to the left. At the microscopic level,cytoarchitectonics of the cranial cortex shows cells,functions, neuromediator quantitative levels, and receptor subtypes that are asymmetric between hemispheres. Although some of these differences occur in all human or animal species, many more differences are seen in studies within the same species as they move from individual to individual.

According to the function of nerve cells located in different parts of the cerebral cortex, the bark row is divided into three zones: sensory, movement and associative zones. The set of nerve cells located in the zones of perception is considered the Supreme center of all sensory organs of the human body, which receive impulses from receptors of sensory organs such as the skin, vision, hearing, sense of smell and taste. The set of nerve cells in the zones of movement of the pustlob of the brain acts as a higher nerve center that controls movement, receiving impulse from the receptors of muscles, spindles, joints, bones . Associative zones analyze and synthesize the effect from the organs of perception and movement. The scaly part of the Cerebral Hemispheres is the physiological basis of the higher nervous activity of a person, the material basis of our psychic activity.

The ability of a person to think, mind, assimilate, remember, colish, treat, culture, acquire knowledge, learn beautifully, perform complex actions is an activity of the brain stem. If children do not follow a healthy eating pattern and do not receive the necessary nutrients, it affects their mental and physical activity, and certain diseases in adults suffer, for example, from ischemic heart disease.if, on the other hand, the effects and results of household conditions are studied which one studies their positive effects on development and lifestyle. In other words, a decrease in their development and a decrease in their health in case of a bad start of life affect the bottleneck of the social economic situation of their life.. In difficult situations, the state of differences in the state of Health at an early age leads to a further increase in age periods.

Types of intercellular connections

1. Vertical connections: these connections occur between different layers of the bark. Neurons located in each layer interact and transmit information from top to bottom and bottom to top.

2. Horizontal connections: these connections occur between neurons within the same layer. They provide local processing of information and establish rapid connections between neurons located in the same layer.

3. Interhemispheric connections: connections between the right and left hemispheres are made, for example, through the corpus callosum. These links provide information exchange and coordination between the two hemispheres.

Importance of intercellular connections Intercellular connections provide functional integration of the brain. They are: • Information processing: connections between neurons make it possible to process information quickly and efficiently. * Cognitive functions: interactions play an important role in logical thinking, memory, and learning processes. * Sensory and motor control: intercellular connections are important for sensory information processing and motor response management.

Intercellular connections in the bark of the cranial hemispheres provide complex and multifaceted processes. Their types and significance are important in the implementation of human cognitive, sensory and motor functions. In the future, research in this area will help to further understand the functioning of the brain and provide new opportunities for the treatment of neurological diseases.Intercellular connections in the cranial hemispheric cortex play an important role in providing human cognitive and motor functions. Connections between neurons located in the bark provide information exchange and integration

Inter-neuronal connections and their types • Axonal connections: mediated by axons of neurons. These connections provide information transfer between long-distance neurons. They are mainly contained in white matter. * Dendritic connections: mediated by dendrites of neurons. These connections are important for information exchange between neurons over short distances. * Synapses: connections between neurons are made by synapses. Synapses play an important role in the information transfer process and transmit information using neurotransmitters.

Functions of intercellular connections * Integration: intercellular connections allow you to combine different sensory data and process them as a whole. This process provides cognitive functions such as memory and learning. * Consistency: the connections between the right and left hemispheres ensure consistency. This is important, for example, in the processes of language and logical thinking. * Rehabilitation: intercellular connections are important in the rehabilitation process after injury or illness. They help to establish new links and restore existing links.

Intercellular connections in the cerebral hemispheric cortex play a key role in ensuring the effective functioning of brain activity. Hypoxia, which is oxygen deficiency, negatively affects synaptic connections of brain cells, which can lead to disruption of various cognitive and physiological processes. Changes in intercellular connections in the cerebral hemispheric cortex under the influence of hypoxia worsen the functioning of the brain, which negatively affects attention, memory, and decision-making processes.

This study will help you understand the changes that hypoxia causes in the cerebral hemispheres of the brain and how they affect brain function. These scientific results are important in the treatment and Prevention of hypoxia-related diseases and can help develop effective treatments in clinical medicine. Such studies make it possible to better understand brain processes and improve the treatment of patients in cases such as hypoxia.

1.Kandel, E. R., Schwartz, J. H., & Jessell, T. M. (2013). *Principles of Neural Science* (5th ed.). McGraw-Hill Education.

2.Purves, D., Augustine, G. J., & Fitzpatrick, D. (2012). *Neuroscience* (5th ed.). Sinauer Associates.