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STATODYNAMIC DISORDERS IN ACUTE CEREBRAL CIRCULATION DISORDERS

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The purpose of the study. *He studied the statodynamic changes in acute circulatory disorders in the brain.*

Materials and methods. *statodynamics in acute circulatory disorders in the brain, objective, subjective and clinical functional studies of patients with changes were conducted.*

Results. *Statodynamic disorders are among the most common sleeve syndromes found in medical practice (about 5% of the world's population has different origins and suffers from instability. However, complaints of dizziness and imbalance occurred in 5-10% of patients who went to a therapist, and in 10-20% of patients who went to a neurologist.*

Conclusion. *In acute circulatory disorders in the brain, statodynamic changes are observed. Patients were examined and the results were analyzed.*

Keywords. *statodynamic disorders, acute disorders of cerebral circulation*

Цель исследования. *состоял в изучении статодинамических изменений при острых нарушениях кровообращения в головном мозге.*

Материалы и методы. *статодинамика при острых нарушениях кровообращения в головном мозге были проведены объективные, субъективные и клинические функциональные исследования пациентов с изменениями.*

Результаты. *Статодинамические расстройства являются одними из наиболее распространенных синдромов рукавов, встречающихся в медицинской практике (около 5% населения мира имеют разное происхождение страдает от нестабильности. Однако жалобы на головокружение и дисбаланс возникали у 5-10% пациентов, обращавшихся к терапевту, и у 10-20% пациентов, обращавшихся к неврологу.*

Вывод. *при острых нарушениях кровообращения в головном мозге наблюдаются статодинамические изменения пациенты были обследованы и проанализированы результаты.*

Ключевые слова. *статодинамические нарушения, острые нарушения мозгового кровообращения.*

Тадқиқот мақсади. *мияда қон айланишининг ўткир бузилишдларида статодинамик ўзгаришларини ўрганишдан иборат бўлган.*

Материаллар ва усуллар. *мияда қон айланишининг ўткир бузилишдларида статодинамик ўзгаришлари бўлган беморларнинг объектив, субъектив ва клиник функционал текширувларидан ўтказилди.*

Натижалар. *Статодинамик бузилишлар тиббий амалиётда учрайдиган енг кенг тарқалган синдромлардан биридир (дунё аҳолисининг тахминан 5% турли хил*

келиб чиқадиган беқарорликдан азият чекмоқда. Шу билан бирга, бош айланиши ва номутаносиблик шикоятлари умумий амалиёт шифокорига борган беморларнинг 5-10 фоизида ва неврологга келган беморларнинг 10-20 фоизида учради.

Хулоса. *мияда қон айланишининг ўткир бузилишдларида статодинамик ўзгаришлари мавжуд беморлар текширувлардан ўтказилиб, натижалари таҳлил қилинди.*

Калит сўзлар. *статодинамик бузилишлар, мия қон айланишининг ўткир бузилишлари.*

Relevance. In the group of patients with acute cerebral circulatory disorders (ACI), a special category of patients consists of people complaining of dizziness and instability in the absence of specific neurological symptoms (ataxia and nystagmus are allowed) in their clinical picture, the so-called isolated dizziness of central origin. It is this category of patients that will be given attention in this work due to the difficulty of differentiating these life-threatening conditions with benign peripheral vestibulopathies. In a population study. ONMC was verified in 3.2% of patients admitted to the emergency department with complaints of acute dizziness and instability. Recently, attempts have been made several times to develop clinical protocols for the differential diagnosis of acute episodes of dizziness and instability at the "bedside". The first studies were devoted to finding correlations between complaints, risk factors, symptoms of the disease and the likelihood of stroke. Thus, it was demonstrated that there is a significant association between recurrent attacks of dizziness, double vision, age over 50 years and STROKE. However, most of these studies were retrospective and therefore characterized by a low degree of evidence. At the same time, the results of some other works are of some practical interest. In a study by Cnyrim C. et al. (2008) included patients with complaints of rotational vertigo, balance disorders and horizontal rotatory nystagmus without auditory disorders, stem or cerebellar disorders. The authors proved that in order to differentiate vertigo of central and peripheral origin, it is recommended to use a number of clinical tests: a vertical eye divergence test, a study of nystagmus and subjective visual vertical, a test of impulsive head movement, and an assessment of smooth tracking movements in the vertical plane. The specificity and sensitivity of the battery of ONMC verification tests turned out to be 92% in the case when all 5 tests indicated the central nature of the statodynamic disorders [1.3.5.7.9.11.13.15].

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Results. Another algorithm for the differential diagnosis between central and peripheral vertigo is a battery of HINTS tests (Head Impulse, Nystagmus, Test of Skew). The proponents stated that there was no corrective saccade when performing the Halmagi test (another name is the test of impulsive head movement (TIG)) It is the main point in the differential diagnosis of stroke, and the battery of tests itself turns out to be a more specific way to confirm a stroke compared to an MRI scan of the head performed early after an attack of dizziness and instability. Subsequently, Newman-Toker D. and others added a fourth diagnostic test: a hearing assessment, which is how an improved algorithm, HINTS plus, appeared. Acute hearing loss on the positive TIG side in patients with acute attack of dizziness and instability indicates a vascular genesis of the disease. It should be noted that when using CT scans of the head in patients with acute vertigo, the probability of a false negative conclusion is very high, since computed tomography has a low sensitivity to detect cancer in the vertebral-basilar basin. Despite the fact that head MRI is a more sensitive method for confirming stroke, the technical feasibility of its implementation is extremely low (it is performed in less than 3% of patients and is not included in the usual protocol for examining patients with suspected stroke. In addition, according to Newman-Toker D.E. et al. (2016) when performing an MRI scan of the head of a patient with isolated central vertigo in DWI mode, the probability of a false negative result in the first 24 hours is 15-25%, and a labyrinth infarction is not verified at all. Therefore, analyzing the results of a clinical examination of a patient with an acute attack of dizziness and instability is a difficult task and often requires the participation of related specialists, as well as performing neuroimaging studies to make a decision on the final diagnosis. Treatment of patients with dizziness and instability due to stroke does not differ from that carried out in any other type of stroke and is carried out in accordance with current clinical recommendations [2.4.6.8.10.12.14].

Vestibular migraine (VM) is the first most common cause of spontaneous recurrent vertigo. At the same time, about 80% of patients with VM complain of dizziness to doctors, but less than 20% of them are correctly diagnosed. According to the hypothesis of VM, which is accompanied by a headache attack, is considered as a migraine aura caused by spreading

depression along the cerebral cortex in the direction from the primary focus. The modern pathogenetic concept of migraine is based on the position of the presence of genetically determined hyperexcitability of the nervous system, characterized by a decrease in the threshold of response to various sensory stimuli and the uniqueness of the sensory processing system. A key element of the above-described model of the occurrence of a migraine attack is the release of calcitonin gene-bound peptide into the synaptic cleft. The development of vestibular symptoms in patients with migraine is associated with the presence of a close connection between the vestibular nuclei and the neural centers responsible for modulating nociceptive signals (dorsal suture nucleus, cells of the blue spot and the lateral part of the tire, caudal part of the trigeminal nerve nucleus, etc.). In most patients, classical migraine first debuts, and then after a few years dizziness joins it, forming the classic VM pattern: paroxysms of sudden, moderate or severe systemic dizziness and migraine headache. VM, as well as an attack of any other form of migraine, can be triggered by certain triggers. Previously, it was believed that patients with AMD could not have auditory impairments at the time of an attack, however, this concept has now been revised. Many patients note a fluctuating change in hearing, a feeling of stuffiness in the ear, tinnitus at the time of an attack and periodically during the inter-attack period, which significantly complicates the differential diagnosis of AMD from Meniere's disease [11.13].

The diagnosis of VM is established based on the typical clinical picture of the disease. In 2018, the International Headache Society (IHS), the International Society of Neuropathology (Barany-Society) and other experts developed a consensus on the diagnostic criteria for VM, which are presented below. Meeting criteria B and D. The presence of migraine attacks with or without aura in the anamnesis or currently ongoing. Vestibular vertigo1 of pronounced or moderate intensity lasting from 5 minutes to 72 hours. At least 1/2 of seizures are associated with one of the three signs of migraine: 1. Headache is characterized by at least 2 of the 4 signs: - unilateral localization- pulsating nature of pain-severe or moderate intensity- increases when performing habitual movements 2. Photo and phonophobia 3. Visual aura D. Other diagnoses in accordance with ICHD-3 and the causes of vestibular disorders are excluded. Note.

1. Vestibular disorders include: a) spontaneous vestibular vertigo: – false sensation of movement of the patient himself (internal vertigo) – false sensation of movement of surrounding objects (external vertigo) b) positional vertigo that occurs when the head

position changes d) dizziness that occurs when observing complex or large moving visual targets e) dizziness that occurs when moving the head e) dizziness and nausea caused by head movements.

2. Vestibular vertigo is considered moderate in intensity if it interferes with, but does not completely interfere with, the performance of habitual daily work, and pronounced if it completely interferes.

Complex therapy of migraine consists of three main components: elimination of migraine-provoking factors, seizure relief and preventive treatment.

It is recommended to use classical anti-migraine drugs and vestibular suppressants to relieve an attack of AMD. Preventive therapy is indicated in case of frequent (two or more per month) and severe seizures. Beta-blockers (propranolol), tricyclic antidepressants (amitriptyline), selective serotonin and norepinephrine reuptake inhibitors (venlafaxine, etc.) and calcium antagonists (verapamil) are used as drugs of choice.In addition, valproates (500 mg / day), levetiracetam (500 mg / day) and topiramate (25-100 mg / day) are used.

Conclusion. The modern pathogenetic concept of migraine is based on the position of the presence of genetically determined hyperexcitability of the nervous system, characterized by a decrease in the threshold of response to various sensory stimuli and the uniqueness of the sensory processing system. A key element of the above-described model of the occurrence of a migraine attack is the release of calcitonin gene-bound peptide into the synaptic cleft. The development of vestibular symptoms in patients with migraine is associated with the presence of a close connection between the vestibular nuclei and the neural centers responsible for modulating nociceptive signals (dorsal suture nucleus, cells of the blue spot and the lateral part of the tire, caudal part of the trigeminal nerve nucleus, etc.). In acute circulatory disorders in the brain, statodynamic changes are observed. Patients were examined and the results were analyzed.

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