



CLINICAL CHARACTERISTICS AND CAUSES OF SMALL SCALE DISORDER MOTOR SKILLS IN CHRONIC CEREBRAL ISCHEMIA

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Annotation: Vascular brain lesions are the most common cause of death in many countries of the world. Stroke ranks second in the structure of total mortality in Russia. More than 400 thousand cases of strokes are registered annually, with a mortality rate of up to 35%. The primary disability rate after a stroke is 3.2 per 10% of the population, and no more than 20% of those who previously worked return to work. People with disabilities due to cerebrovascular diseases account for 9.8% of the total contingent of people with disabilities among the population. Statistical data indicate that the increase in vascular diseases of the brain occurs due to an increase in the prevalence of chronic cerebral ischemia (CHEM).

Keywords: dyscirculatory encephalopathy, chronic cerebral ischemia, cerebral amyloidosis, hemostasiogram

Relevance. Vascular brain lesions are the most common cause of death in many countries of the world. Stroke ranks second in the structure of total mortality in Russia. More than 400 thousand cases of strokes are registered annually, with a mortality rate of up to 35%. The primary disability rate after a stroke is 3.2 per 10,000 people, and no more than 20% of those who previously worked return to work. People with disabilities due to cerebrovascular diseases account for 9.8% of the total contingent of people with disabilities among the population. Statistical data indicate that the increase in vascular diseases of the brain occurs due to an increase in the prevalence of chronic cerebral ischemia (CHEM).

In Uzbekistan, according to data from Majidov N.M. (2000), Gafurov B.G. (2009) and others, the number of patients suffering from chronic forms of CVD is about 550-600 thousand.

The problem of dyscirculatory encephalopathy, from the point of view of the etiological moment, clinical polymorphism is quite well sanctified. But it should be noted that there are differences in the course and clinical manifestation of CHEM in age and gender aspects, which in practice is not given enough attention.



A problematic issue is the unity in terminology in describing dyscirculatory encephalopathy itself and the pre-segment cognitive and emotional disorders that occur in stage II of the disease. There are no descriptions of the clinical features of these disorders, changes with the progression of dyscirculatory encephalopathy, and there is no description of their Dopplerographic and neuroimaging patterns. The important question is how long it is possible to talk about the formation of dementia.

Materials and methods of research. Chronic cerebral ischemia is a cerebrovascular insufficiency caused by a progressive deterioration of blood supply to brain tissue. The clinical picture of chronic cerebral ischemia consists of headaches, dizziness, decreased cognitive functions, emotional lability, motor and coordination disorders. The diagnosis is made on the basis of symptoms and data from ultrasound/ultrasound of cerebral vessels, CT or MRI of the brain, and hemostasiogram studies. Therapy of chronic cerebral ischemia involves hypotensive, hypolipidemic, antiplatelet therapy; if necessary, surgical tactics are chosen. Chronic cerebral ischemia is a long—term cerebral circulatory insufficiency in which brain cells, or neurons, lack important nutrients, which leads to impaired brain function. The disease is among the most common. Up to 70-75% of people with diseases affecting the brain suffer from cerebral ischemia. Chronic cerebral ischemia is a slowly progressive dysfunction of the brain that has arisen as a result of diffuse and/or small—focal damage to brain tissue in conditions of long-term insufficiency of cerebral blood supply. The concept of "chronic cerebral ischemia" includes: dyscirculatory encephalopathy, chronic ischemic brain disease, vascular encephalopathy, cerebrovascular insufficiency, atherosclerotic encephalopathy, vascular (atherosclerotic) secondary parkinsonism, vascular dementia, vascular (late) epilepsy. Of the above names, the term "dyscirculatory encephalopathy" is most often used in modern neurology. The incidence of the disease is at least 700 people per 100,000 population. Taking into account the increase in life expectancy and the aging of the population, as well as the improvement of diagnostic methods (MRI), the number of these patients continues to grow. The disease is more common in older people — after the age of 60.

The main causes of the disease are:

1. Arterial hypertension (high blood pressure).
2. Atherosclerosis (the appearance of plaques and possible blockage) of cerebral vessels.
3. Venous dysfunctions of the brain: impaired vein tone (with traumatic brain injuries, hypertension, diseases of the endocrine system, alcohol and drug



intoxication), mechanical disruption of blood outflow (congestive venous dysfunction).

4. Diabetes mellitus.

5. Cardiac arrhythmias, chronic heart failure, coronary heart disease, acquired heart defects.

6. Arterial hypotension (low blood pressure).

7. Cerebral amyloidosis (deposition of amyloid protein in the wall of cerebral vessels).

8. Vasculitis (inflammation of the vascular wall).

9. Hereditary angiopathies: telangiectasia (formation of protrusions and aneurysms in insufficiently strong vessels), Willebrand's disease (episodic spontaneous bleeding).

10. Hereditary connective tissue dysplasia, which leads to changes in the arteries of the brain and heart.

11. Disorders of the blood coagulation system.

12. Hyperhomocysteinemia (high levels of homocysteine, which increases the risk of peripheral artery disease).

Atherosclerosis and hypertension are considered among the main etiological factors, and a combination of these two conditions is often identified. Other cardiovascular diseases can also lead to chronic cerebral ischemia, especially those accompanied by signs of chronic heart failure, cardiac arrhythmias (both permanent and paroxysmal forms of arrhythmia), often leading to a drop in systemic hemodynamics. The abnormality of the vessels of the brain, neck, shoulder girdle, aorta (especially its arch) is also important, which cannot manifest themselves before the development of atherosclerotic, hypertensive or other acquired process in these vessels.

Recently, venous pathology, not only intra-, but also extracranial, has been assigned a major role in the development of chronic cerebral ischemia. Vascular compression, both arterial and venous, can play a certain role in the formation of chronic cerebral ischemia. It is necessary to take into account not only the spondylogenic effect, but also compression by altered neighboring structures (muscles, tumors, aneurysms). Another reason for the development of chronic cerebral ischemia may be cerebral amyloidosis (in elderly patients).

Clinically detectable encephalopathy is, as a rule, of mixed etiology. In the presence of the main factors of the development of chronic cerebral ischemia, the rest of the variety of causes of this pathology can be interpreted as additional causes.



The identification of additional factors significantly aggravating the course of chronic cerebral ischemia is necessary to develop a correct concept of etiopathogenetic and symptomatic treatment.

Symptoms: The main clinical manifestations of chronic cerebral ischemia are polyformic motor disorders, impaired memory and learning ability, and disorders in the emotional sphere. Clinically, the features of chronic cerebral ischemia are progressive course, staging, and syndromality. It should be noted that there is an inverse relationship between the presence of complaints, especially those reflecting the ability to cognitive activity (attention, memory), and the severity of chronic cerebral ischemia: the more cognitive functions suffer, the fewer complaints. Thus, subjective manifestations in the form of complaints cannot reflect either the severity or the nature of the process. The core of the clinical picture of dyscirculatory encephalopathy is currently recognized as cognitive impairment, detected already in stage I and progressively increasing by stage III. In parallel, emotional disorders develop (inertia, emotional lability, loss of interests), various motor disorders (from programming and control to execution of both complex neokinetic, higher automated, and simple reflex movements).

Stages of development

- Stage I. The above complaints are combined with diffuse microfocal neurological symptoms in the form of anisoreflexia, non-rough reflexes of oral automatism. There may be slight changes in gait (slowness of walking, small steps), decreased stability and uncertainty when performing coordination tests. Emotional and personal disorders (irritability, emotional lability, anxiety and depressive traits) are often noted. Already at this stage, mild cognitive disorders of the neurodynamic type occur: exhaustion, fluctuation of attention, slowing down and inertia of intellectual activity. Patients cope with neuropsychological tests and work that does not require time tracking. The vital activity of patients is not limited.

- Stage II. It is characterized by an increase in neurological symptoms with the possible formation of a mild but dominant syndrome. Individual extrapyramidal disorders, incomplete pseudobulbar syndrome, ataxia, and central PH dysfunction (prozo- and glossoparesis) are revealed. Complaints become less pronounced and less significant for the patient. Emotional disorders are aggravated. Cognitive function increases to a moderate degree, neurodynamic disorders are complemented by dysregulatory (frontal subcortical syndrome). The ability to plan and control your actions is deteriorating. The execution of tasks with unlimited time limits is



disrupted, but the ability to compensate remains (the ability to use hints remains). There may be signs of a decrease in social and professional adaptation.

• Stage III. It is characterized by the vivid manifestation of several neurological syndromes. Impaired walking and balance (frequent falls), urinary incontinence, Parkinsonian syndrome. Due to the decrease in criticism of their condition, the volume of complaints decreases. Behavioral and personality disorders manifest themselves in the form of explosiveness, disinhibition, apathetic-abusive syndrome and psychotic disorders. Along with neurodynamic and dysregulatory cognitive syndromes, operational disorders (disorders of speech, memory, thinking, and practice) appear, which can develop into dementia. In such cases, patients slowly become maladapted, which manifests itself in professional, social and even daily activities. Disability is often stated. Over time, the ability to self-serve is lost.

References:

1. DcS, professor Khodjieva D.T., Yo'ldosheva N.Q. "Specificity of cognitive impairment in chronic cerebral ischemia". International scientific and practical Conference: Modern views and research – 2021, July, 2021: Egham, London. Independent Publishing Network Ltd – 52 p. (page 23-24)
2. PhD, associate professor Akhrorova Sh.B., Yo'ldosheva N.Q. "Клинические и диагностические особенности хронической ишемии мозга". Journal of neurology and neurosurgery research special issue 1 – 2021. International Scientific and Practical Conference. Bukhara, October 20-21, 2021 (pp. 179-181)
3. Yo'ldosheva N.Q. "Cognitive disorders in patients with chronic brain ischemia" Amaliy va Tibbiyot fanlari ilmiy jurnali "Ekologiya va ekologik ta'lim muammolari" maxsus son – 2022. (323-326 bet)
4. Yo'ldosheva N.Q. " Features and dynamics of disorders of cognitive and static-locomotor functions in chronic brain ischemia". Journal of GALAXY INTERNATIONAL INTERDISCIPLINARY RESEARCH JOURNAL (GIIRJ) ISSN (E): 2347-6915 Vol. 11, Issue 10, Oct. (2023) <https://internationaljournals.co.in/index.php/giirj/article/view/4466>
5. Yo'ldosheva N.Q. "Морфологические аспекты нарушения мелкой моторики при хронической ишемии головного мозга" Journal of Iqro volume 7, issue 1 - 2023 special issue (pp. 94-99) <https://wordlyknowledge.uz/index.php/iqro/article/view/3245>
6. Yo'ldosheva N.Q. "Morphological aspects of static-locomotor function disorders in chronic cerebral ischemia" Journal of International Journal of Medical Sciences And Clinical Research (ISSN – 2771-2265) VOLUME 03 ISSUE 12 PAGES: 7-12 <http://theusajournals.com/index.php/ijmscr/article/view/2002>
7. Yo'ldosheva N.Q. "Особенности когнитивных и эмоциональных расстройств при хронической ишемии мозга" MODELS AND METHODS IN MODERN SCIENCE International scientific-online conference <https://doi.org/10.5281/zenodo.10618807>