



## Verticalization in Early Rehabilitation of Ischemic Strokes and Features of Movement Recovery

**Pulatov S. S.**  
**Rasulova R. Sh.**  
**Mukhamadiev F. Sh.**

*Received 16<sup>th</sup> May 2021,*  
*Accepted 18<sup>th</sup> June 2021,*  
*Online 6<sup>th</sup> July 2021*

Bukhara State Medical Institute

**ABSTRACT:** Rehabilitation in the aspect of systemic functional neurodynamics and neuroplasticity is the maintenance of the general active background and tone of the central nervous system, which is provided by a dosed influx of stimuli from the periphery and training of modal-specific processes, including visual, auditory, kinesthetic, sensory analyzers. When working with patients at this level, the fan principle is observed (G. E. Ivanova, 2009), based on the initial stimulation of the preserved one modality with the step-by-step involvement of other modalities. For example, after correcting posture disorders, pathological attitudes of paretic limbs, they move on to restoring fine motor skills of the hand, training walking speed (timed walking test), and complicating speech therapy classes.

To form an effective rehabilitation program, it is necessary to take into account the peculiarities of neurological disorders in post-stroke patients. First of all, this concerns the restoration of the functioning of the motor sphere, which occurs in a similar way to the development of the motor skills of an infant with the sequential control of the combination of head movements and turning, then maintaining balance in the sitting and standing positions, and eventually verticalization and walking. Motor disorders in a patient who is in bed may not coincide with those in verticalization and walking, most often this is due to the presence of a non - reflex syndrome with the movement of the subdominant hemisphere, atactic and postural disorders that make walking difficult.

**Purpose of the study** – Hypertension is one of the main risk factors for stroke. According to the registry, 78% of stroke patients had only arterial hypertension or arterial hypertension in combination with atherosclerosis. Moreover, in the structure of arterial hypertension, a significant place is occupied by "soft" arterial hypertension – it is diagnosed in 61% of people who have suffered an ischemic stroke and in 39% of people with a hemorrhagic stroke. In the case of detection of a small deep (lacunar) infarction pathogenetically associated with arterial hypertension, the main direction of preventing repeated disorders of cerebral circulation is to conduct adequate antihypertensive therapy, taking into account the features of the patient's daily blood pressure profile.

In the absence of an adequate decrease in blood pressure at night, its increased variability with a rapid rise in the early morning hours, it is advisable to prescribe long-acting antihypertensive drugs. The tactics of drug therapy of arterial hypertension are based on the following principles: avoid a sharp decrease in blood pressure; give preference to combinations of drugs with minimal side effects□ In

antiplatelet therapy, the first-choice drug is acetylsalicylic acid (aspirin) at the optimal dose of 1 mg/kg of patient weight. The antiaggregational effect develops in the first hours after taking prepa-29 rata. If the patient had thrombolysis, then acetylsalicylic acid is prescribed 1 day after thrombolysis and exclusion of hemorrhagic transformation of the focus according to CT of the brain. The cytoprotective effect of antacid is due to an increase in the level of prostaglandins in the stomach wall, increased secretion of hydrocarbonates, and an increase in gastric mucus glycoproteins. If it is necessary to potentiate the action of aspirin ® or there are contraindications for its appointment, clopidogrel is used at a dose of 75 mg once a day or dipyridamole (Curantil ® ). The drug is one of the most studied antiplatelet agents, reduces the aggregation properties of platelets, increases the plasticity of red blood cells, and their adaptability to the microcirculatory bed. Under the action of the drug, antioxidant redox cellular reactions are activated, as a result of which the formation of free radicals in platelets is suppressed. In addition, curantil ® it has a beneficial effect on the vascular wall, suppresses the proliferation of smooth muscle cells of the vascular wall, which in turn inhibits the formation of atherosclerotic plaques. Curantil ® has a number of advantages over acetylsalicylic acid, does not inhibit cyclooxygenase and prostaglandins, does not damage the mucous membranes, and therefore, the risk of bleeding and gastropathy is minimal. In the clinical guidelines for the management of patients with AF, the treatment strategy consists of antiarrhythmic and anticoagulant therapy. In the case of a cardioembolic subtype of stroke, it is mandatory to prescribe anticoagulants: warfarin and new oral anticoagulants for the non-valvular form of AF-dabigatran (pradaxa), xarelto. With a violation of lipid metabolism (an increase in the level of total cholesterol of more than 200 mg% or 5.2 mmol/l, as well as an increase in the level of low-density lipoproteins of more than 130 mg% or 3.36 mmol/l) statins are prescribed. Patients with symptomatic ipsilateral ischemic stenosis of the carotid arteries of 50-69% are indicated for surgical treatment – carotid endarterectomy. For stenoses of less than 50%, surgery is not recommended, but it can be performed in the presence of unstable atherothrombotic plaque. Carotid percutaneous transluminal angioplasty and / or stenting are alternatives to carotid endarterectomy. In parallel with the measures for the secondary prevention of stroke, an early rehabilitation program is being developed. The main strategy of early rehabilitation is to destabilize the pathological system, which is formed in a period of up to 14 days. This period is conventionally called the "rehabilitation window". The main tasks after the diagnosis and stabilization of the patient's condition are: ensuring adequate activity, maintaining the stability of the somatic state, stimulating and supporting the functions of the nervous system by using the preserved function (postural system, physical system, vegetative regulation). In the absence of conditions that significantly limit restorative treatment (ischemic heart disease with frequent attacks of angina, poorly controlled high hypertension, acute inflammatory diseases, psychoses, pronounced cognitive disorders), from the first hours and days of hospital stay, rehabilitation measures are started: position treatment, passive exercises, individual massage techniques. In the next 3-4 weeks, the MDB members assess the formed neurological deficits: motor, cognitive, emotional disorders, swallowing and speech disorders, and disorders of other systems. Rehabilitation measures should be dosed taking into account the load on the cardiovascular and respiratory system, be built taking into account the stimulation of endogenous plasticity of the brain and synaptogenesis, and be based on ongoing drug therapy. The use of drugs, according to the conducted studies, increases the effectiveness of other methods of rehabilitation – physical, neuropsychological, contributes To the task of drug therapy of the acute period includes the impact on the neurochemical reactions of neurons, improving the processes of neuroplasticity of brain tissue, preventing complications, normalizing the emotional state in order to form motivation for rehabilitation treatment, facilitating patient care. The drugs of neuroprotective and neuroreparative action include citicoline (cerakson ® ), the domestic drug cellex. Cellex normalizes blood supply, protein synthesis in the brain, restores the balance of neurotransmitters, promotes the activation of neuroplasticity and neuroreparation processes. Cellex has a direct neuro-therapeutic effect, which is due to its constituent tissue-specific proteins and polypeptides – growth factors and differentiation of nerve cells and blood vessels.

**Conclusion** signaling molecules leads to the inhibition of apoptosis processes, which ensures the preservation of neurons in the penumbra zone, inhibition of the local inflammatory response and reduction of edema, as well as the restoration of local blood flow in the ischemic zone with its reperfusion. As a result of the primary neuroprotective action of cellex, the focus of brain tissue necrosis decreases due to the interruption of the apoptosis process 32 and a decrease in the severity of perifocal edema in the penumbra zone. Cellex is prescribed 1.0 ml (1 mg) subcutaneously once a day for ten days. The pathogenetic therapy of stroke includes the use of drugs with an antioxidant effect, neuropeptides, metabolic and vasoactive agents.

### List of Literature

1. Alekseeva, N. P. Combinatorial analysis of two forms of latent periodicity of categorical sequences / N. P. Alekseeva, A. O. Konradi, B. B. Bondarenko. // Vestn. Saint-Petersburg. Un-ta. Ser. 1. Matematika. Mechanics. Astronomy. - 2007. - No. 3. - pp. 55-64.
2. Alekseeva, N. P. Symptomatic analysis in the study of long-term clinical prognosis / N. P. Alekseeva, A. O. Konradi, B. B. Bondarenko // Arterial hypertension. - 2008. - Vol. 14, No. 1. - p. 38-43.
3. Amirdzhanova, V. N. Population indicators of the quality of life according to the SF-36 questionnaire (results of the multicenter study of the quality of life "MIRAGE") / V. N. Amirdzhanova // Nauch. - prakt. rheumatology. - 2008. - No. 1. - C. 36-48.
4. Eronov Yo. K. Disease incidence and statistical indicators in children with cerebral palsy. //International engineering journal for research development .Vol. 5 Issue 4.2020.-pp 31-32.
5. Eronov Yo. K. Implementation of comprehensive prevention of dentalcariyes in children with cerebral palsy.// International Journal of pguman Computing Studies Vol 2 № 6 2020. JHCS.-pp 22-24.
6. Eronov Yo. K. Indications for oral hygiene in stch children with cerebral palsy.// International Journal of teguated Education Vol 3, Issue VI, June ,2020.-pp. 26-27.
7. Eronov Yo. K. Evalutionofstomatologicalinvestications in children diagnosed with cerebral palsy. "АКТУАЛЬНЫЕ ВЫЗОВЫ СОВРЕМЕННОЙ НАУКИ" Украина выпуск 4(48) Часть-1.-с. 45.
8. Eronov Yo. K. Criteria forevaluation of oral hygiene behaviorin children withcerebral palsy. //“АКТУАЛЬНЫЕ ВЫЗОВЫ СОВРЕМЕННОЙ НАУКИ” Украина выпуск 4(48) Часть-1.- с.45.
9. Eronov Yo. K.. Oral hygiene in sick childrenwithcerebralpalsy.// “Actual problems of childrendenristry” India 22 may/ 2020.- с.19-20.
10. Eronov Yo. K. Caries and stastical indicators in children with cerebral palsy. “Actual problems of childrendenristry” . “Actual problems of childrendenristry” India 22 may 2020.- с.26-27.