

Research Journal of Pharmaceutical, Biological and Chemical Sciences

Dynamics Of Functional Parameters In The Post-Stroke Period On The Background Of Active Muscular Activity.

Makhov AS, and Medvedev IN*.

Russian State Social University, st. V. Pika, 4, Moscow, Russia, 129226

ABSTRACT

The course of ontogenesis is inevitably accompanied by the onset of dysfunction and pathological changes in different organs and systems. This inevitably weakens the overall vitality of the body. This requires the continuation of an active search for means of reliable recovery of a person in case of disorders in the body. One of the conditions that requires special attention of rehabilitation therapists, is a stroke, the prevalence of which has recently remained high. It is recognized that for such patients it is very useful to increase muscle activity to the extent possible. It helps to optimize blood flow, which provides the brain with the necessary amount of nutrients and oxygen. It is rational to use in these patients a complex of specially designed exercises with a gradual increase in load. Classes must be regular. It is noticed that the use of feasible, long-term well-chosen physical exercises can provide an early and fairly complete restoration of motor, somatic and mental functions after a stroke in surviving patients.

Keywords: physiology, health, physical condition, stroke, rehabilitation.

**Corresponding author*

INTRODUCTION

During ontogeny inevitably accompanied by the occurrence in different organs and systems dysfunctions and pathological changes [1]. This inevitably weakens the overall viability of the whole organism. This situation requires continued active search for means of reliable recovery, particularly when expressed disorders in the body. One of these conditions is stroke, the incidence of which in recent times remains high. It was observed that for such patients is very useful to increase muscle activity in the feasible extent [2].

This circumstance contributes to the physiological acceleration of blood flow, which provides the brain with the necessary amount of nutrients and oxygen [3,4]. In this case, a complex of specially designed exercises with gradually increasing load is very useful [5-7]. Classes should be regular, otherwise they will not bring positive results. Given the high degree of usefulness of physical exercises in the scheme of rehabilitation after a stroke, the goal was set in the work: to consider the dynamics of the functional indicators of post-stroke patients experiencing regular muscular loads.

Moderate exercise helps to reduce the excitability of the nervous system, increase the body's ability to withstand stress [8,9]. Gymnastics after a stroke has a number of beneficial effects [10]: it preserves the mobility of joints and normalizes muscle tone; prevents the formation of pressure sores in the feet, back and pelvis; helps to restore the work of the brushes; helps relieve symptoms of paralysis; removes hypertonicity of muscles, normalizes the work of the affected muscles [11,12].

Physical activities are more effective if performed in conjunction with a massage. It should be based on a number of guidelines [13]. It is performed in the form of light stroking circular movements, it is always done, starting from the upper parts of the body. The impact on the back is carried out by tapping movements, and the pectoral muscles are affected, starting from the center of the chest, and then transferred to the armpits [14-16].

A very effective option of therapeutic physical culture in post-stroke patients may be the following version of a set of exercises. The patient takes a rounded object in his hands. If necessary, you need to help hold the object in his hands. These exercises for fine motor skills of hands should be performed as often as possible, they can help restore the work of the hand and fingers separately [17,18]. During exercises it is recommended to bend and unbend legs frequently. These movements should be carried out in such a way that the limb straightens itself, moving along the surface of the bed [19].

The patient should actively squeeze and unclench the fingers of the affected hand - passively at the beginning and then independently. It is rational to combine with alternate raising and lowering of the arms during the main movement in the shoulder joint [20,21].

It is recommended to hang a paretic leg or arm on a towel or elastic bandage. Then, rotational movements are performed with the limb moving to the right and left [22]. This exercise is able to prepare the patient for full-fledged physical education. They are performed 2-3 times a day for about half an hour [23].

After suffering a severe stroke, mental training is often recommended for patients [24]. Regular, causing the patient interest in mental stress, help him to restore the affected neurons, train memory, contribute to the restoration of the normal thinking process with overcoming aphasia developing after a stroke [25].

Active physical exertion in post-stroke patients is more often carried out in the prone position. These activities begin in the acute period of the disease. As an example, the following set of exercises [26-28].

Hand hold the remote object located behind (the back of the bed) [29]. On a signal to perform "pulling up", straightening the legs and arms as possible. Then return to the original position [30]. It is necessary to straighten the affected hand, starting with the fingers, then go to the hands and forearms. With the help of a splint and elastic bandage, the limb is fixed in this position for half an hour [31-33]. This allows you to quickly restore the function of the hands after a stroke [34]. The sliding exercise is performed with effort. Lying on the bed, the patient tries to alternately bend the legs at the knees so that the feet do not come off the surface of the bed. Exercise is performed 8-12 times [35]. It is also recommended to make alternate turns of the head

to the left and to the right. This exercise helps to relieve hypertonicity of the neck muscles [36]. Another exercise, which is very desirable to perform after a stroke, is performed from a prone position with the arms along the body. The body should be relaxed [37-39]. At the signal, one arm should be bent in the elbow, fixed in that position for one or two seconds. Then lower the limb on the bed. On the second signal to bend the other hand. In addition, for the hands should perform a more complicated version of the exercise. The limb should be suspended with a bandage and make with it all sorts of movements: flexion, extension and rotational movement [40].

Very effectively for a long time alternately bend the fingers into a fist and bend back. With the help of these movements, fine motor skills begin to noticeably recover and gradually the ability to perform strong, precise movements of any directionality is restored to the fingers [41].

CONCLUSION

The optimal functioning of the nervous system depends on the state of its vascular network. Very often, in the presence of predisposing diseases in the vessels of the brain, thrombosis can occur. As a result, stroke inevitably develops. Often it is difficult and serious in terms of the forecast condition. It is possible to increase the effectiveness of rehabilitation in post-stroke patients by rationally increasing their physical activity. To this end, they are justified in using their feasible, lengthy, well-chosen physical exercises. With their help, it is possible to ensure early and sufficiently complete restoration of motor, somatic and mental functions in this group of patients.

REFERENCES

- [1] Zavalishina SYu. (2018) Functional Features Of Platelets In Newborn Calves With Iron Deficiency. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(5) : 1153-1158.
- [2] Apanasyuk LA, Soldatov AA. (2017) Socio-Psychological Conditions for Optimizing Intercultural Interaction in the Educational Space of the University. Scientific Notes of Russian State Social University. 16(5-144) : 143-150. doi: 10.17922/2071-5323- 2017-16-5-143-150.
- [3] Pozdnyakova ML, Soldatov AA. (2017) The Essential and Forms of the Approaches to Control the Documents Execution. Contemporary problems of social work. 3 (1-9): 39-46. doi: 10.17922/2412-5466-2017-3-1-39-46.
- [4] Makhova AV. (2018) Physiology Of The Hypothalamus In The Human Body. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(5) : 478-484.
- [5] Zavalishina SYu. (2018) Functional Properties Of Hemocoagulation In Calves Of Dairy Nutrition. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(5) :1016-1022.
- [6] Zavalishina SYu. (2018) Functional Activity Of Anticoagulant System In Calves During Early Ontogeny. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(5) : 837-843.
- [7] Zavalishina SYu. (2018) Functional Activity Of Thrombocytes In Newborn Calves. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(5) : 919-924.
- [8] Bikbulatova AA, Andreeva EG. (2018) Restoration Of The Profile Of Bioregulators Of Blood Plasma In People Of Second Adulthood With Osteochondrosis Of The Spine Against The Background Of Daily Wearing Of Medical And Preventive Clothing. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(4) : 413-419.
- [9] Glagoleva TI, Zavalishina SYu, Mal GS, Makurina ON, Skorjatina IA. (2018) Physiological Features Of Hemo-coagulation In Sows During Sucking. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(4):29-33.
- [10] Alifirov AI, Mikhaylova IV. (2018) Physical Education Of Highly Qualified Chess Players. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(4) : 1725-1730.
- [11] Vorobyeva NV, Mal GS, Skripleva EV, Skriplev AV, Skoblikova TV. (2018) The Combined Impact Of Amlodipin And Regular Physical Exercises On Platelet And Inflammatory Markers In Patients With Arterial Hypertension. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(4) : 1186-1192.
- [12] Zavalishina SYu. (2018) Functioning Of Platelets In Milk And Vegetable Nutrition Calves. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(5) : 943-949.

- [13] Zavalishina SYu. (2018) Physiological Features Of Coagulation In Calves Of Plant Nutrition. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(5) : 899-904.
- [14] Zavalishina SYu. (2018) Physiological Features Of Vascular Hemostasis In Calves Of Dairy-Vegetative Food. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(5) : 1137-1143.
- [15] Bikbulatova AA, Andreeva EG. (2018) Achievement of psychological comfort in 5-6-Year-Old children with scoliosis against the background of daily medicinal-prophylactic clothes' wearing for half a year. Bali Medical Journal. 7(3): 706-711. DOI:10.15562/bmj.v7i3.947.
- [16] Maksimov VI, Zavalishina SYu, Parakhnevich AV, Klimova EN, Garbart NA, Zabolotnaya AA, Kovalev Yul, Nikiforova TYu, Sizoreva EI. (2018) Functional Activity Of The Blood Coagulation System Against The Background Of The Influence Of Krezacin And Gamavit In Newborn Piglets Who Underwent Acute Hypoxia. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(5) : 2037-2042.
- [17] Bikbulatova AA. (2018) Bioregulatory Effects Of The Daily Wearing Of Medical And Preventive Pants On The Body Of Pregnant Women Suffering From Habitual Miscarriages Of The Fetus. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(4) : 889-896.
- [18] Bikbulatova AA, Karplyuk AV. (2018) Professional And Labor Orientation Of Persons With Disabilities In The Resource Educational And Methodological Center Of The Russian State Social University. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(4) : 1648-1655.
- [19] Gusarov AV, Kornev AV, Kartashev VP, Nekrasova MV (2018) Effect Of Static Exercises With A Deflection On The Tone Of The Skeletal Musculature Of Middle-Aged Women. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(4) : 1716-1724.
- [20] Tkacheva ES, Zavalishina SYu. (2018) Physiological Features Of Platelet Aggregation In Newborn Piglets. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(5) : 36-42.
- [21] Zavalishina SYu. (2018) Functional Activity Of Plasma Hemostasis In Neonatal Calves With Iron Deficiency, Who Received Ferroglucin And Glycopin. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(5) : 1186-1191.
- [22] Bikbulatova AA, Matraeva LV, Erokhin SG, Makeeva DR, Karplyuk AV. (2018) Methodical Foundations Of Carrying Out Competitions Of Professional Skill Among People With Disabilities. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(5) : 243-247.
- [23] Zavalishina SYu. (2018) Deficiency Of Iron As A Cause Of Dysfunction In Calves And Piglets. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(5) : 978-983.
- [24] Zavalishina SYu. (2018) Functional Properties Of Fibrinolysis In Calves Of The First Year Of Life. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(5) : 870-876.
- [25] Zavalishina SYu. (2018) Physiology Of Vascular Hemostasis In Newborn Calves. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(5) : 1037-1044.
- [26] Zavalishina SYu. (2018) Functional Properties Of Anticoagulation And Fibrinolysis In Calves Of Plant Nutrition. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(5) : 1082-1087.
- [27] Zavalishina SYu. (2018) Functional Antiaggregatory Properties Of Blood Vessels In Calves During Transition From Dairy To Plant Type Of Nutrition. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(5) : 1110-1116.
- [28] Maksimov VI, Zavalishina SYu, Parakhnevich AV, Klimova EN, Garbart NA, Zabolotnaya AA, Kovalev Yul, Nikiforova TYu, Sizoreva EI. (2018) Physiological Dynamics Of Microrheological Characteristics Of Erythrocytes In Piglets During The Phase Of Milk Nutrition. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(5) : 454-459.
- [29] Bikbulatova AA. (2018) Peculiarities of abnormalities of locomotor apparatus of children at preschool age with scoliosis of I-II degree living in Central Russia. Bali Medical Journal. 7(3): 693-697. DOI:10.15562/bmj.v7i3.738.
- [30] Bepalov DV, Kharitonov EL, Zavalishina SYu, Mal GS, Makurina ON. (2018) Physiological Basis For The Distribution Of Functions In The Cerebral Cortex. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(5): 605-612.
- [31] Skorjatina IA (2018) Therapeutic Possibilities Of Rosuvastatin In The Medical Complex In Relation To Disaggregation Vascular Control Over Erythrocytes In Persons With Arterial Hypertension And Dyslipidemia. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(2) : 977-983.
- [32] Bikbulatova AA, Pochinok NB, Matraeva LV, Erokhin SG, Makeeva DR, Karplyuk AV. (2018) The Russian Historical Aspect Of The Development Of The International Federation Of Abilimpix. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(5) : 329-335.

- [33] Bikbulatova AA, Pochinok NB, Soldatov AA, Matraeva LV, Erokhin SG. (2018) Organization Of International Competitions Of Professional Skill Among People With Disabilities. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(5) : 379-387.
- [34] Tkacheva ES, Zavalishina SYu. (2018) Physiological Aspects Of Platelet Aggregation In Piglets Of Milk Nutrition. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(5) : 74-80.
- [35] Tkacheva ES, Zavalishina SYu. (2018) Physiology Of Platelet Hemostasis In Piglets During The Phase Of Newborns. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(5) : 1912-1918.
- [36] Skoryatina IA, Zavalishina SYu. (2017) Ability to aggregation of basic regular blood elements of patients with hypertension and dyslipidemia receiving non-medication and simvastatin. Bali Medical Journal. 6(3):514-520. DOI:10.15562/bmj.v6i3.553.
- [37] Maloletko AN, Yudina TN. (2017) (Un)Making Europe: Capitalism, Solidarities, Subjectivities. Contemporary problems of social work. 3 (3-11) : 4-5.
- [38] Zavalishina SYu, Makurina ON, Vorobyeva NV, Mal GS, Glagoleva TI. (2018) Physiological Features Of Surface Properties Of The Erythrocyte Membrane In Newborn Piglets. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(4):34-38.
- [39] Bikbulatova AA, Karplyuk AA, Parshin GN, Dzhabfar-Zade DA, Serebryakov AG. (2018) Technique for Measuring Vocational Interests and Inclinations in High-School Students with Disabilities. Psikhologicheskaya nauka i obrazovanie-psychological science and education. 23(2) : 50-58. doi: 10.17759/pse.2018230206.
- [40] Bikbulatova AA, Pochinok NB, Matraeva LV, Erokhin SG, Makeeva DR, Karplyuk AV. (2018) Formation Of International Practice Of Holding Competitions Of Professional Skills Among Professionals With Disabilities. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(5) : 296-302.
- [41] Zhalilov AV, Mironov IS. (2018) Identification Of The Most Significant Shortcomings Of Sports Competitions In Sambo Among People With Hearing Impairment In A Separate Region Of Russia. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 9(3) : 672-677.