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CLINICAL FEATURES AND REGULATORY ORGANIZATION OF THE PERIOD OF REHABILITATION OF NEUROLOGICAL SYNDROME AFTER HEMOROGICAL STROKE

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Anatation. The combination of emergency measures in the acute phase of stroke and early intensive rehabilitation allows only 5-6% of patients with stroke to require constant care and about 40% of patients to return to their previous state. Various neurological disorders and cognitive changes that occur after a stroke affect both the mental and physical state of the patient, which can be directly explained by a violation of blood circulation in the cerebral hemispheres, in this article we will consider post-disease neurological syndromes and rehabilitation.

Keywords. *neurological syndrome*, *stroke*, *stroke*, *disability*, *rehabilitation*.

Stroke is an acute vascular accident that ranks first in terms of disability and mortality. Despite improved medical care, the vast majority of stroke sufferers remain disabled. (1) Women are more prone to developing stroke, recover longer, and die more from its consequences. (2) Factors that increase the risk of stroke in women:

- smoking;
- use of hormonal contraceptives (especially over 30 years);
- Hormone replacement therapy for climacteric diseases.
- Atypical symptoms of female stroke:
- an attack of severe pain in one of the limbs;
- sudden onset of hiccups;
- an attack of severe nausea or abdominal pain;
- sudden fatigue;
- short-term loss of consciousness;
- acute chest pain;
- strangulation;
- sudden rapid heartbeat;
- insomnia (insomnia).

Principles of treatment. Future prospects depend on early treatment of stroke. As for the vascular condition (however, for most diseases), it is called the "therapeutic window" when treatment measures are most effective. It lasts 2-4 hours, after which part of the brain, unfortunately, is completely destroyed. The treatment system for patients with cerebrovascular disease includes three stages: prehospital, inpatient, and rehabilitation. At the prehospital stage, a stroke is diagnosed and the patient is immediately transported to a specialized facility by ambulance. In the inpatient phase, stroke therapy can be started



in the intensive care unit, where emergency measures are taken to maintain the body's vital functions (heart and respiratory function) and to prevent possible complications. (4)

Particular attention should be paid to the consideration of the recovery period, as often its provision and implementation falls on the shoulders of the patient's relatives. Because blood vessels are the number one disability structure among neurological patients and there is a tendency to "rejuvenate" the disease, everyone should familiarize their relatives with a rehabilitation program after suffering a stroke to adapt to a new life and restore self-care. The World Health Organization (WHO) defines medical rehabilitation as follows: (3)

Medical rehabilitation is an active process, the goal of which is to achieve full recovery of functions impaired due to illness or injury, or, if this is not possible, to integrate the physical, mental and social potential of the disabled person into society in the most appropriate way.

There are some patients who experience partial (and sometimes complete) independent recovery of damaged functions after a stroke. The rate and extent of this recovery depends on a number of factors: the duration of the disease (stroke duration), the size and location of the lesion. Restoration of impaired function is carried out in the first 3-5 months from the date of onset of the disease. It is at this point that recovery measures should be implemented to the maximum extent possible - so that they provide maximum benefit. By the way, it is very important how actively the patient participates in the rehabilitation process, understands the importance and necessity of rehabilitation measures and strives to achieve maximum results.

The five stages of stroke are traditionally distinguished:

• the most acute (up to 3-5 days);

- acute (up to 3 weeks);
- early recovery (up to 6 months);
- late recovery (up to two years);
- continuous residual exposure period.
- Basic principles of rehabilitation measures:
- start earlier;
- durability and durability;
- complexity;
- step-by-step.

Rehabilitation treatment begins during the acute period of stroke, during the treatment of the patient in a specialized neurological hospital. After 3-6 weeks, the patient is transferred to the rehabilitation department. If a person still needs additional rehabilitation after discharge, it can be done on an outpatient basis in the rehabilitation department of the outpatient clinic (if any) or in a rehabilitation center. But more often than not, this concern falls on the shoulders of relatives. Rehabilitation tasks and tools vary depending on the stage of the disease.

Rehabilitation during acute and early vascular recovery

It is performed in a hospital setting. At present, all activities are aimed at saving lives. When the threat to life is over, measures to restore function begin. Posture therapy, massage, passive exercise, and breathing exercises begin in the early days of stroke, and the timing of the onset of active recovery measures (active exercise, standing, standing, static loads) is individual and depends on the nature and extent of circulatory disturbances in the brain. from the presence of concomitant diseases. Exercises are performed only in clearly conscious patients and in their satisfactory condition. Minor hemorrhages, small and medium heart attacks - an average of 5-7 days from stroke, with extensive bleeding and heart attacks - 7-14 days. (6.7)

The main measures of rehabilitation in the period of acute and early recovery are the appointment of drugs, kinesiotherapy, massage.



Medications. Rehabilitation of drugs in pure form is not possible because it is a method of treatment. However, drug therapy creates a background that promotes disinhibition of temporarily inactive brain cells, providing the most effective recovery. Medications are strictly prescribed by a doctor.

Kinesiotherapy. In the acute period it is carried out in the form of medical gymnastics ... Kinesiotherapy is based on proper treatment, passive and active movements and breathing exercises. Learning to walk and self-service are formed on the basis of active actions taken relatively later. When doing gymnastics, the patient should not overwork, strictly dose the movements and gradually increase the load. Positional treatment and passive gymnastics for uncomplicated ischemic stroke begin on 2-4 days of illness, for hemorrhagic stroke - on 6-8 days.

Dynamic exercises are performed mainly for the muscles, usually without raising the tone: for the shoulder holding muscles, back supports, wrist, arm and finger extensors, hip muscle holders, leg and foot flexors. (8) With clear paresis, they begin with ideomotor exercises. (the patient first imagines the movement, then tries to perform it when pronouncing the movement) and with movements in a comfortable environment. Lighting conditions involve the elimination of gravitational and frictional forces in a variety of ways, making it difficult to perform movements. To do this, active movements are performed on a smooth surface in a horizontal plane, with block and bath systems, as well as Methodist support supporting the lower and upper limb segments of the working joint.

By the end of the acute period, the nature of the active movements becomes more complex, the repetitive velocities and numbers gradually increase but significantly increase as they begin to perform exercises for the trunk (slight turns, bending to the sides, bending and stretching). (9)

After 8–10 days (ischemic stroke) and 3–4 weeks (hemorrhagic stroke), if the patient feels well and is in a satisfactory condition, they begin to learn to sit. Initially, they help him get a semi-sitting position with an opening angle of about 30 0 per day for 3-5 minutes. By monitoring your heart rate for a few days, they increase both the angle and the sitting time. When changing the position of the body, the heart rate should not exceed 20 beats per minute; if the heartbeat is clear, then the angle of descent and the duration of the exercise are reduced. Typically, after 3-6 days, the rise angle is brought to 90 0 and the procedure time is up to 15 minutes, after which the legs begin to learn to sit down (when the paret arm is secured with a handkerchief to avoid squeezing the shoulder joint bag). (11) When sitting, healthy leg time -placed on the paretic side over time - this teaches the patient to distribute body weight to the paretic side.

In addition to teaching the patient to walk, recovery exercises are performed at home: dressing, eating, personal hygiene procedures. The self-service recovery exercises are listed in the table below.

Massage. Massage begins on uncomplicated ischemic stroke on days 2-4 of the disease, hemorrhagic stroke - on days 6-8. The massage is performed while the patient is lying on his back and on the healthy side, every day, starting at 10 minutes and gradually increasing the duration of the massage to 20 minutes. Remember: strong tissue irritation and fast speed of massage movements can increase muscle flexibility! Massage should be selected with an increase in muscle tone to a selected level.

In muscles with raised tones, only constant flat and holding strokes are used. When massaging the opposite muscles (antagonist muscles), flattening (flat straight, pinner-shaped and connected space), light transverse, longitudinal and spiral friction, light shallow longitudinal, transverse and spear kneading are used.

Massage direction: shoulder girdle \rightarrow shoulder \rightarrow wrist \rightarrow arm; pelvic cavity \rightarrow knee \rightarrow lower leg \rightarrow foot. Particular attention is paid to massaging the main muscles of the pectoralis, where the tone is usually increased (clicks are applied) and the tone is reduced deltoid muscle (methods of stimulation in the form of faster kneading, rubbing and beating). Massage course 30-40 sessions.



Rehabilitation measures in the hospital are carried out for a period not exceeding 1.5-2 months. If it is necessary to continue rehabilitation treatment, the patient is transferred to an outpatient rehabilitation facility. (12)

Vascular rehabilitation and outpatient rehabilitation measures during residual periods

Patients are referred for outpatient rehabilitation treatment 1.5 months before the ischemic stroke and 2.5 months after the hemorrhagic stroke. Patients with motor, speech, sensory, coordination disorders are rehabilitated in an outpatient setting. Rehabilitation in an outpatient setting for a patient who has had a stroke a year or more may be helpful if there are signs of recovery.

The main types of outpatient rehabilitation:

- drug therapy (strictly prescribed by a doctor);

- physiotherapy;

- kinesiotherapy;

- psychotherapy (performed by doctors of relevant specialties);

- restoration of high cortical function;

- occupational therapy.

Physiotherapy This is done under the supervision of a physiotherapist. Physiotherapy treatments are prescribed 1-1.5 months before the ischemic stroke and 3-6 months before the hemorrhagic stroke. Contraindications to kinesiotherapy - blood pressure above 165/90 mm Hg, severe cardiac arrhythmias, acute inflammatory diseases.

The following types of kinesiotherapy are used during early recovery:

1) on-site treatment;

2) active movements in healthy legs;

3) passive, active-passive and active or paretic legs in easy conditions of movement;

4) "Relaxation" exercises are combined with "acupressure".

Exercise direction: shoulder girdle \rightarrow shoulder \rightarrow wrist \rightarrow arm; pelvic cavity \rightarrow knee \rightarrow lower leg \rightarrow foot. All movements should be repeated gradually, at each joint, in all planes, 10-15 times; all exercises should be combined with proper breathing (it should be slow, smooth, rhythmic, with prolonged breathing). Make sure there is no pain during exercise. Restoration of proper walking skills is of particular importance: a more even distribution of body weight in sick and healthy legs, support of the whole leg, more attention to "triple contraction" exercises (flexion of the hip, knee and ankle) without holding the paretal leg. aside.

During the late recovery period, a clear increase in muscle tone is observed. To reduce it, you need to do special exercises. The peculiarity of this exercise is that during treatment the paretic arm and leg are set for a longer period of time. Removable plaster pieces are applied 2-4 times a day for 2-3 hours and with significant shaking they are left overnight.

Navigation. In recent years, stroke has become a common pathology among people of different genders and ages, with 4 out of every 1,000 patients suffering a brain injury. Eighty percent of all reported cases are ischemic brain injury, and the remaining 20 percent are hemorrhagic stroke. It is almost impossible to predict the crisis of the disease and its peak (bleeding itself), because it is difficult to answer the question of how many days the patient will be in intensive care after a stroke.

The nature of the pathology is unique to each patient and there are no people with the same recovery period. Therefore, the number of days hospitalized depends on several factors, which are discussed below. In general, the treatment of a vascular condition consists of three periods - the prenatal stage, the patient in the intensive care unit (intensive care unit) and the therapy in the general ward.

Rupture or blockage of cerebral arteries inevitably leads to acute cerebral vascular accident with rapid development of brain function. If the condition persists for more than a day, a stroke is diagnosed, which in 35% of cases results in the death of the patient. In particular, timely prognosis of stroke worsens the prognosis. This disease ranks first among the total number of causes of primary disability in humans.



Patients who received qualified medical care within the first two hours after a cerebrovascular accident were more likely to recover. A patient with suspected pathology should be admitted to an emergency hospital.

It is not uncommon for people to overcome the disease, much depends on a properly organized rehabilitation. Therefore, it is necessary to continue treatment of vascular disease at home after discharge from the hospital during the rehabilitation phase.

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