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## **Assessment of the State of the Emotional Sphere and the Dynamics of Cognitive Functions on the Background of Rehabilitation Treatment in the Acute Period Acute Cerebrovascular Disorders**

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### **ABSTRACT**

Based on the data of neurological examination and somatic status of 150 patients with ACVA, a plan of rehabilitation measures was drawn up for each patient. In the rehabilitation department, patients received a standard course of rehabilitation treatment for 24 days, including drug therapy and non-drug drugs. The influence of stabilization of the emotional sphere and somatic pathology (arterial hypertension, heart disease) on the prognosis of the outcome of rehabilitation in the early stages was studied. Was found. that the presence of a high level of anxiety in the emotional state of patients, an internal unresolved conflict on the one hand, and the absence of a positive psychological background significantly slow down and complicate the recovery process.

**KEYWORDS:** neurological examination, somatic status, ACVA, a plan of rehabilitation measures, rehabilitation department, patients, standard course, rehabilitation treatment, drug therapy, influence of stabilization, emotional sphere, somatic pathology, arterial hypertension, heart disease.

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### **RELEVANCE OF THE TOPIC**

The problem of cerebral ischemic stroke (IS) is very acute due to the significant frequency of its development, a high percentage of disability and mortality [2]. Every year 6 million people worldwide have a stroke [5]. Among the causes of the development of acute disorders of cerebral circulation (ACVA), according to the concept of pathogenetic heterogeneity of IS, cardiac pathology occupies one of the leading places [1].

The main objectives of the treatment of post-stroke patients are restoration of impaired functions; treatment of secondary pathological syndromes; prevention of recurrent strokes [3].

Rehabilitation measures for stroke are most effective in the first 6 months (early recovery period), while later (late recovery and residual periods), the possibilities of rehabilitation are significantly limited [4].

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### **PURPOSE OF THE STUDY**

Study of the influence of stabilization of the emotional sphere and somatic pathology (arterial hypertension, heart disease) on the prognosis of the outcome of rehabilitation in the early stages.

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### **MATERIALS AND RESEARCH METHODS**

The study involved 200 patients who were treated in the neurological department of the Bukhara branch of the Republican Scientific Center for Emergency Medical Aid in the early period of stroke (2-4 weeks after stroke).

Among them there were 98 men (49%), 102 women (51%) aged 37 to 71 years. Of these, 7 (3.5%) were 30–39 years old, 49 (24.5%) were 40–49 years old, 98 (49.0%) were 50–59 years old, and 46 (23.0%).

There were 100 patients of young working age, i.e. 50% of all examined patients. In terms of social status: 40.5% (81 people) labor activity is associated with intellectual and mental work. Patients were admitted to the sanatorium and were initially examined by us in the

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following periods from the onset of the disease: from 11 to 28 days, on average - 17 days.

The complex of examination of patients admitted to the rehabilitation department included a general examination, a study of the neurological status. Psychological testing was carried out in 120 people out of all examined to determine the state of the emotional sphere in patients who underwent stroke using the Luscher test, the Spielberger and Hanin test for the study of anxiety, the Barrow Neurological Institute screening test (the state of higher cerebral functions), assessment of the degree of disability produced on the Rankin scale.

Diagnostic tests were used in order to identify the targets of therapeutic measures and outline ways to solve them through differentiated therapeutic interventions. The indicator of the effectiveness of the treatment measures and the control position was the dynamics of the degree of disability according to the Rankin scale at the beginning and end of the course of rehabilitation treatment.

### RESULTS

According to situational anxiety (Spielberger - Khanin test), all patients were divided into 3 groups. The first group with a low level of anxiety (up to 30 points) - 7 (5.8%) people, the second group with a moderate degree of anxiety (up to 45 points) - 62 (51.7%) people, the third group with a high level of anxiety (46 points and more) - 51 (42.5%) people. According to the division into groups, patients received differentiated therapy.

Despite the low indicators of anxiety, patients of group I were characterized by a state of fear and confusion, in connection with which they were prescribed a drug from

the group of nootropics with a sedative effect Phenibut (250 mg 2-3 times a day) and group psychocorrective measures - auto-training in combination with music and aromatherapy.

Group II of patients with severe psychosthenia, inconsistency in behavior, received grandaxin (50 mg 2 times a day) - a tranquilizer with anxiolytic effect, with them individual psychologist sessions were conducted.

Patients of group III had a history of severe traumatic situations and were in a depressive state. They were prescribed an antidepressant from the group of selective serotonin reuptake inhibitors (SSRIs) - stimoloton (25-50 mg once a day) in combination with a short course of an antipsychotic drug - phenazepam (0.5 mg at night for 7 days) and individual consultations psychotherapist.

All patients of the 3rd group underwent personality-oriented psychotherapy and cognitive-behavioral psychotherapy, with elements of psychodrama and gestalt therapy.

As a result, in patients of group I, the changes in the degree of anxiety turned out to be insignificant, while the dynamics of higher cerebral functions was significant. In groups II and III, the degree of change in anxiety before and after treatment was more pronounced (more significant in group III); the dynamics of higher cerebral functions in these groups is the same and less bright than in patients of group I, because restoration of cortical disturbances occurred independently, against the background of stabilization of the emotional state. In all three groups, there was a decrease in the degree of disability (Rankin scale), but more significant changes were observed among patients of group III. Indicators of situational anxiety before and after treatment are presented in table 1.

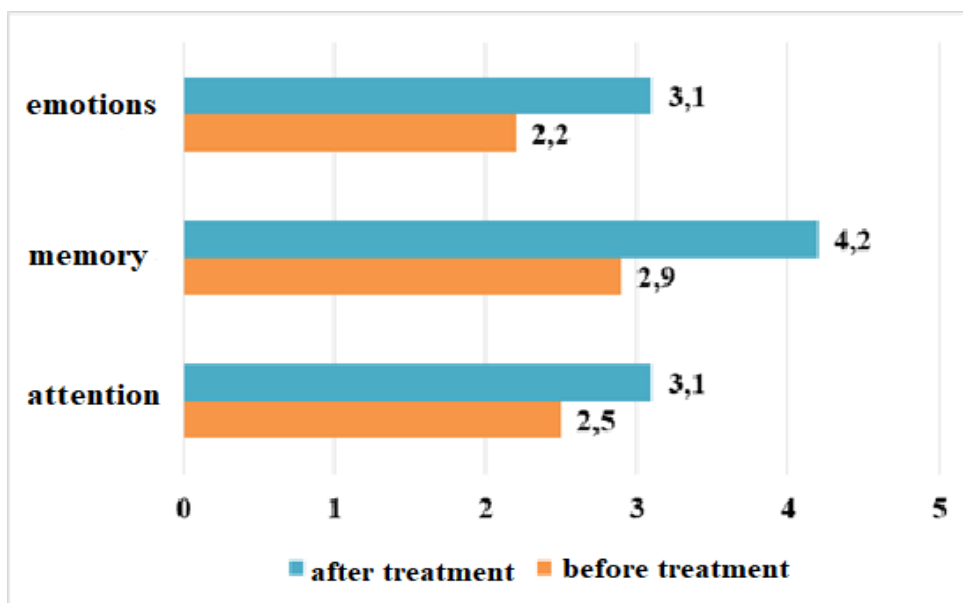
**Table 1. Indicators of psychological tests in patients with stroke during treatment, score (M ± σ).**

Group	Situational anxiety		p <	Overall assessment of brain function		p <	Degree incapacity for work		p <
	Initially	after		initially	after		initially	after	
I	29,3 ± 0,7	29,1 ± 0,8	0,05	41,1 ± 1,2	48,2 ± 0,8	0,05	1,00 ± 0,36	0,83 ± 0,38	0,05
II	40,7 ± 0,8	37,1 ± 0,9	0,05	42,1 ± 0,4	45,3 ± 0,4	0,05	1,73 ± 0,25	0,92 ± 0,18	0,05
III	49,2 ± 0,9	43,0 ± 1,2	0,05	42,1 ± 0,5	45,5 ± 0,4	0,05	2,20 ± 0,27	1,24 ± 0,21	0,05
Total	43,8 ± 0,8	39,2 ± 0,9	0,05	42,1 ± 0,4	45,7 ± 0,4	0,05	1,89 ± 0,18	0,93 ± 0,13	0,05

During the course of treatment, the patients also improved their higher brain functions. The differences in indicators at the beginning and after treatment according to the screening test are statistically significant and amounted to (42.1 ± 0.4) and (45.7 ± 0.4) points, respectively. A detailed analysis of the structural components of the screening test showed that in the general group of patients, memory indicators improved statistically significantly. Significant improvements in cognitive functions were

observed in patients in group 1 (see table), while taking the nootropic drug Phenibut. The best dynamics was noted for indicators of short-term type of memory (p < 0.05).

As can be seen from the diagram, the indicators changed as follows: attention - 2.5 ± 0.4 / 3.1 ± 0.2 (p < 0.05) (maximum - 3 points); memory - 2.9 ± 0.2 / 4.2 ± 0.4 (p < 0.05) (maximum - 7 points); emotions - 2.2 ± 0.3 / 3.1 ± 0.2 (p < 0.05) (maximum - 4 points).



**Fig. 1 Dynamics of higher cortical functions in patients with stroke, in points.**

According to the screening test for assessing higher cortical functions (attention / concentration / memory), it can be said that violations of short-term memory, namely operational memory for words and numbers, were 2 times more frequent than those of attention.

#### **CONCLUSION**

Thus, the presence of a high level of anxiety in the emotional state of patients, an internal unresolved conflict on the one hand, and the absence of a positive psychological background significantly slow down and complicate the recovery process.

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