

Restoration of cognitive and neurological functions in patients with acute and transient impairment of cerebral circulation

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Background: Cerebrovascular diseases are one of the most common causes of death. Transient ischemic attacks (TIA) increase the risk of developing ischemic stroke (IS). In the first 48 hours after the onset of symptoms of TIA, stroke develops in 10% of patients. With these pathologies, not only neurological, but also cognitive functions suffer. Often this leads to disability of patients.

Objective: To study the extent and dynamics of recovery of cognitive and neurological functions in patients with acute cerebrovascular accident (ACCD)- with IS in the vertebral-basilar basin (VBB) and with transient cerebral circulation disorder (TCCD) - with TIA in VBB.

Materials and methods: 90 patients aged 42 to 87 years in 1 day and 10 day of in IS the VBB and TIA in the VBB were examined; 40 of them were transferred to TCCD, and 50 to ACCD. Neurological functions were examined using the NIHSS scale. Cognitive impairment was detected using a brief assessment of mental status (MMSE) and the Montreal Cognitive Evaluation Scale (MoCA test). When comparing patient groups, the non-parametric Mann-Whitney U-test was used. Differences were considered reliable for $p < 0.05$ significance. The results are presented as the mean and standard deviation ($M \pm s$).

Results: The average age of patients who underwent IS was 65.44 ± 10.93 years, and patients with TIA - 56.58 ± 10.78 years. In the analysis of the data, reliable results ($p < 0.05$) were obtained that in the acute period, patients with IS had more pronounced cognitive impairment and a lower dynamics of their recovery than patients who underwent TIA. Also patients with IS had a more pronounced neurological deficit, both on day 1 and on day 10, than patients who underwent TIA.

Conclusion: Patients with ACCD have more pronounced cognitive and neurological disorders than patients who first experienced TIA. In addition, patients with IS experience a slower recovery of cognitive and neurological functions than patients with TIA.