Stroke

UPPER EXTREMITY MOTOR FUNCTION AND COGNITION IN POST-STROKE PATIENTS

Viktoriia Gerasymchuk[1]

Department of Neurology and Neurosurgery, Ivano-Frankivsk National Medical University, Ukraine

Motor and cognitive dysfunction are the most prevalent among the stroke consequences and have a high impact on the patients' life quality. They are usually studied and treated as distinct entities, though both of them may influence each other's course and manifestations.

The aim of study was to determine the relations between the the upper extremity function and cognition in post-stroke patients.

Materials and methods. Totally there were 90 patients examined in the 1-year period after first-ever anterior circulation ischemic stroke. Examination of the upper extremity function was performed with the Fugl-Meyer assessment (FMA). Cognitive function was assessed with the Mini Mental State Examination (MMSE), Montreal Cognitive Assessment (MoCA), Frontal Assessment Battery (FAB), Trail-making Test A and B (TMT) and the Clock Drawing Test (CDT).

Results. Motor dysfunction mostly manifested in low "Wrist" and "Hand" subtests scores (5 [2; 7] and 7 [3; 9], respectively) and therefore resulted in decreased "Total motor function" score of 41 [27; 53]. The most significant relations were found out between the FMA "Hand", "Total motor function" subtests and CI indices. MoCA score correlated with FMA "Wrist" (r=0.32; p=0.021), "Hand" (r=0.51; p=0.001) and "Total motor function" (r=0.49; p=0.005) scores. "Hand" score also correlated with the FAB (r=0.43; p=0.019), CDT (r=0.22; p=0.016), TMT-A (r=-0.3; p=0.027) and TMT-B (-0.49; p=0.007) scores. There was no significant correlation between the sensory FMA subtests.

Conclusion. Our findings suggest that upper extremity motor impairment, especially hand and wrist dysfunction, can be associated with worse cognitive performance and executive dysfunction in particular.