

Clinical correlates of post-stroke apathy

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Post-stroke emotional disorders are widely discussed during the recent decade, but the post-stroke apathy remains the least studied among them. 147 patients in the early recovery period of first-ever atherothrombotic anterior circulation ischemic stroke and 30 healthy individuals (control group (CG)) were examined. Neuropsychological examination of cognitive and emotional status, sonography of extra- and intracranial vessels and non-parametric data analysis (Statistica 8.0) were used. The mean apathy level in Starkstein Apathy Scale (SAS) score was 12 [9; 16] compared to 5 [4; 7] in CG ($p < 0.05$); patients with right-hemispheric stroke (RHS) manifested significantly higher SAS score of 13 [11; 19] ($p < 0.05$) compared to 10 [9; 13] in patients with left-hemispheric stroke (LHS). Comorbidity of apathy and depression was observed in 14.9% of RHS patients and exceeded the LHS indices (2.5%) ($p < 0.05$). SAS score correlated with the degree of stroke severity on the Scandinavian Stroke Scale ($r = -0.34$; $p = 0.027$), cognitive functioning on MMSE ($r = -0.34$; $p = 0.048$), FAB ($r = -0.49$; $p = 0.036$) and MoCA ($r = -0.41$; $p = 0.0068$), and the depression severity according to HADS ($r = 0.61$; $p < 0.001$) and ZSDS ($r = 0.6$; $p < 0.001$). Increase of SAS score was also associated with ipsilateral internal carotid artery stenosis ($r = 0.32$; $p = 0.027$) and decrease of peak velocity in the middle cerebral artery ($r = -0.31$; $p = 0.036$). These results allow suggesting that patients after RHS are more predisposed to post-stroke apathy. At the same time, apathy was associated with cognitive dysfunction, that may be a result of some common links of underlying pathogenesis chain of these neuropsychological syndromes.