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REMISSION OF POSTSTROKE COGNITIVE IMPAIRMENT NO DEMENTIA: CLINICAL AND IMAGING CORRELATES

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Introduction: Cerebral microbleeds (CMBs) may contribute to cognitive deficits in stroke. Cognitive impairment that does not meet the criteria for dementia (cognitive impairment no dementia [CIND]) is common in stroke, and patients with such impairment can revert to normal cognition.

Objective: To investigate the association of CMBs and remission of poststroke CIND.

Aim: To understand the evolution of poststroke cognitive impairment no dementia (CIND) is bi-directional.

Methods: 143 patients with CIND at three months after stroke were recruited and followed up for one year. Remission of CIND was defined as a conversion of cognitive status from CIND to cognitively intact at follow-up. MRI variables in terms of infarction, cerebral microbleeds (CMBs), and white matter hyperintensities (WMHs) and hippocampal volume were analyzed. Logistic regression was performed to find the predictors of the remission of poststroke CIND.

Results: 30 (21.0%) out of the 143 patients converted to cognitive intact at follow-up. In univariate comparisons, subjects with remission of CIND had younger age (67.1 ± 9.5 vs. 73.6 ± 7.6 years, $p < 0.001$) and higher education years (5.1 ± 4.0 vs. 3.6 ± 4.0 , $p = 0.039$). They also had lower WMHs volume (8.2 ± 8.2 vs. 18.6 ± 19.7 cm³, $p < 0.001$), lower frequency of CMBs (10.0% vs. 31.0%, $p = 0.021$) and lower volume of the lateral ventricle (33.3 ± 16.5 vs. 42.6 ± 19.4 cm³, $p = 0.017$). In logistic regression, age (odds ratio [OR] = 0.913, 95% C.I. = 0.866-0.962, $p = 0.001$) and absence of CMBs (OR = 4.292, 95% C.I. = 1.174-15.625, $p = 0.028$) were significant predictors of remission of CIND.

Conclusions: Younger age and absence of CMBs predict the remission of poststroke CIND.