Arterial spin labeling may contribute to the prediction of cognitive deterioration in healthy elderly individuals

We investigated whether subtle cognitive deterioration in healthy elderly individuals could be predicted by ASL imaging and EEG markers. A longitudinal study included 75 stable controls (sCON) and 73 deteriorated controls (d-CON) at 18-month clinical follow-up and 65 patients with mild cognitive impairment (MCI). Continuous EEG was recorded during a n-back working memory task and two-dimensional pulsed ASL was performed at the baseline visit. Reduced ASL in the posterior cingulate cortex was associated with the development of subtle neuropsychological deficits. Three EEG indices distinguished the two control groups: alpha and beta even related desynchronization (dCON > sCON) and beta inter-trial coherence (dCON < sCON). These results will be discussed as a paradigm of predictive biomarkers in preclinical forms of dementia.

Biography

Panteleimon Giannakopoulos has completed his MD from the University of Athens and is board certified psychiatrist and psychotherapist from 1999. He completed his Post-graduate training in London and Paris before taking the chair of old age psychiatry in Geneva. He has also a full training in cognitive neurosciences focusing on dementing conditions. He was the chairman of the Department of Psychiatry in Geneva from 2005 to 2015 before being appointed as medical director of the Forensic Psychiatry for the Geneva country. He has published more than 220 peer-reviewed articles (H index: 42), and has been serving as an Editorial Board Member and reviewer of repute.

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