

Neuropsychological outcome after lobar and deep spontaneous intracerebral hemorrhage

Mélanie Planton (PhD)^{1,2}, Laure Saint-Aubert (PhD)³, Nicolas Raposo (MD)^{1,2}, Laura Branchu (MSc)², Aicha Lyoubi (MD)⁴, Jean-François Albucher (MD)^{1,2}, Jérémie Pariente (MD, PhD)^{1,2}

¹ Service de Neurologie, Pôle Neurosciences, Centre Hospitalier Universitaire de Toulouse, CHU Purpan, Place du Dr Baylac, Toulouse Cedex 9, France

² Toulouse NeuroImaging Center, Université de Toulouse, Inserm, UPS, France

³ Department of Neurobiology, Care Sciences and Society, Center for Alzheimer Research, Division of Translational Alzheimer Neurobiology, Karolinska Institutet, Stockholm S-14186, Sweden

⁴ Service de Neurologie, Groupe Hospitalier Lariboisière-Fernand-Widal, Assistance Publique Hôpitaux de Paris, Paris, France

Background: Assessment of cognitive outcome after a spontaneous intracerebral hemorrhage (ICH) has been little investigated and specifically in cerebral amyloid angiopathy (CAA). Influence of Alzheimer's pathology on cognitive profile of CAA patients is probably important because of the high co-occurrence of these two pathologies.

Aims: We propose to compare neuropsychological profile of patients with CAA related to ICH and compare the data with those of mild cognitive impairment due to Alzheimer's disease (MCI-AD) patients, deep ICH patients and healthy controls. The second aim was to estimate prevalence of VCDs at months in ICH patients.

Methods: Each participant underwent a comprehensive neuropsychological assessment and a brain MRI. ICH patients without preexisting cognitive decline were divided into 'lobar' or 'deep' groups, according to the location of the hemorrhage. Only patients who met the Boston criteria for CAA were kept in the lobar group. Prevalence of cognitive disorders was estimated using the recently published VASCOG criteria.

Results: Twenty patients with CAA-related ICH, 20 patients with deep ICH, 20 patients with MCI-AD and 17 healthy controls were included. All participants were matched on age, sex and level of education. No significant difference was observed on cognitive functioning at 3 months between CAA and deep ICH patients. Patients with CAA exhibited significant language, executive and speed processing deficits according to the control's group and were statistically different to MCI-AD patients on gestural praxis, initiation and unsurprisingly on memory processes. "Major" and "mild VCDs" were respectively observed in 2.6% and 89.5% of all ICH patients.

Mélanie Planton
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Conclusions: Vascular cognitive disorders are common after either a deep or a lobar ICH. The absence of any significant difference on neuropsychological profile between the two ICH groups was explained by the presence of extensive and multi-domains cognitive impairment in both groups. However, this pattern of cognitive dysfunction appeared as different to those with Alzheimer's disease, suggesting a specific effect of CAA on cognition.