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Self-perceived memory impairment predict Alzheimer's disease but not vascular dementia in independent elderly with white matter changes. Results of the LADIS study

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Objective: To ascertain if self-perceived memory impairment in independent elderly with white matter changes (WMC) is predictor of dementia.

Methods: The LADIS (Leukoaraiosis and Disability) is a prospective European study that evaluates the impact of WMC on the transition of independent elderly into disability. Patients with WMC were enrolled because of minor neurological, cognitive or motor complaints, or incidental findings on cranial imaging, without impact in daily living activities. Subjects were evaluated at baseline and yearly during 3 years with a comprehensive clinical and functional protocol, including a neuropsychological battery (MMSE, ADAS-Cog, VADAS-Cog extension, Trail-making and Stroop tests) and evaluation of depression (DSM-IV criteria and the Geriatric Depression Scale (GDS)). Irrespectively of the referral cause, a question about memory complaints was done in all patients. In each follow-up visit, patient cognitive status was classified as demented, cognitive impairment not demented and no cognitive impairment, according to usual clinical criteria, and then classified according to dementia subtypes. MRI was performed at entry and at the end of the study. WMC severity was rated according to the Fazekas scale. To assess predictors of dementia and dementia subtypes we used survival Cox regression analysis.

Results: 639 subjects were included (74.1 ± 5 years old, 55% women, 9.6±3.8 years of schooling). 168 patients (26%) were enrolled due to minor cognitive complaints without any impact in independency. From the total sample, 63% (399 patients) had complaints from memory at baseline. 89% (568), 78.4% (501), and 75% (480) of the patients from the initial sample were followed-up in clinical visit at year 1, 2 and 3. At the end of the study 90 patients were demented (Alzheimer dementia with vascular component, 34; Vascular dementia, 54; Fronto-temporal dementia, 2) and 147 patients had cognitive impairment not dementia. Using survival Cox regression we found self-perceived memory impairment at baseline as independent predictor of dementia in last follow-up. Considering dementia subtype, self-perceived memory impairment was predictor of AD with vascular component, independently of age, education, WMC severity, GDS score, temporal atrophy and cognitive measures at baseline, but not predictor of Vascular dementia.

Conclusion: Self-perceived memory impairment predicts Alzheimer dementia but not Vascular dementia in independent elderly with WMC.