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Cerebral microbleeds and cognitive decline in old age

The presence of cerebral microbleeds has been associated with dementia and cognitive decline, although studies report conflicting results. Our aim was to determine the potential role of the presence and location of cerebral microbleeds in early stages of cognitive decline. Baseline 3T MR imaging examinations including SWI sequences of 328 cognitively intact community-dwelling controls and 72 subjects with mild cognitive impairment were analyzed with respect to the presence and distribution of cerebral microbleeds. A neuropsychological follow-up of controls was performed at 18 months post inclusion and identified cases with subtle cognitive deficits were referred to as controls with a deteriorating condition. Group differences in radiologic parameters were studied by using nonparametric tests, 1-way analysis of variance, and Spearman correlation coefficients. Cerebral microbleed prevalence was similar in subjects with mild cognitive impairment and controls with stable and cognitively deteriorating conditions (25%-31.9%). In all diagnostic groups, lobar cerebral microbleeds were more common. They occurred in 20.1% of all cases compared with 6.5% of cases with deep cerebral microbleeds. None of the investigated variables (age, sex, microbleed number, location and depth, baseline Mini-Mental State Examination score, and the Fazekas score) were significantly associated with cognitive deterioration with the exception of education of >12 years showing a slight but significant protective effect (OR, 0.44; 95% CI, 0.22-0.92; P = .028). The Mini-Mental State Examination and the Buschke total score were correlated with neither the total number nor lobar-versus-deep location of cerebral microbleeds. Cerebral microbleed presence, location, and severity are not related to the early stages of cognitive decline in advanced age.

Biography

Panteleimon Giannakopoulos obtained his MD degree in the University of Athens in 1989 before completing a full training on psychiatry and psychotherapy in London (Maudsley Hospital and Geneva) as well as postdoc training in Paris (La Pitié-Sâlpetrière Hospital, Federation of Neurology). In 1998, aged 33 years, he has been appointed as associate professor and medical head of the Division of Geriatric Psychiatry of the University Hospitals of Geneva. Later on (2004) he obtained the position of full tenured professor of Psychiatry in the University of Geneva. From 2003 to 2011, he also assumed a parallel position of full professor of Old Age Psychiatry in the University of Lausanne in order to promote the academic careers of junior staff locally. He has been Chairman of the Department of Mental Health and Psychiatry in Geneva for ten years (2005-2015) and vice dean of the Faculty of Medicine in the University of Geneva in charge of postgraduate and continuous education (2003-2011). From December 1st 2015, he is the medical head of the forensic psychiatry development in Geneva county. Specialist of Alzheimer disase research, he published more than 220 peer reviewed articles in the field of neurobiology of aging with particular focus on predictive biomarkers of cognitive decline.

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