

Subjective Cognitive Decline in Cerebral Small Vessel Disease

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Abstract:

Cerebral small vessels are important energy and oxygen supply for the parenchymal structures of the brain. Due to different regional impact of cerebral small vessel diseases (CSVD), individuals may show various symptoms. One of the common symptoms of CSVD is cognitive changes. Studies regarding cognitive decline indicate that there are certain risk factors affecting cognitive function. Moreover distinct neuropsychological tests detect the different stages of progressive cognitive decline. Research shows that subjective cognitive decline (SCD) may be a pre-clinical stage of Alzheimer Disease (AD). It has been shown that the main component of the SCD is decreased memory capacity. Recent studies have proven that AD biomarkers are significantly correlated with informant rated SCD and mild cognitive impairment. There are also studies about cognitively alterations in normal individuals. However, it is not yet known whether cognitively normal CSVD patients have SCD. Scientists have not yet shown if without informant rated only self-experienced cognitive decline can be related to AD biomarkers. In addition, it is also not known whether life style of the patients and daily activities can be associated with SCD. For that purpose, I aimed to answer two questions. First, how many cognitively normal CSVD patients have SCD according to neuropsychological assessment. Second, I evaluated AD biomarkers, CSVD risk factors, lifestyles and daily activities of patients to find out whether there is a significant association between these factors and SCD. My investigations shown that 4% of the cognitively normal CSVD patients have SCD. In addition, my results indicated that lifestyle and daily activities are significantly associated with SCD. Moreover education status and (Montreal Cognitive Assessment) MoCA score also showed significant relation. However, there is no significant association in SCD patients with AD biomarkers and CSVD risk factors.

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