

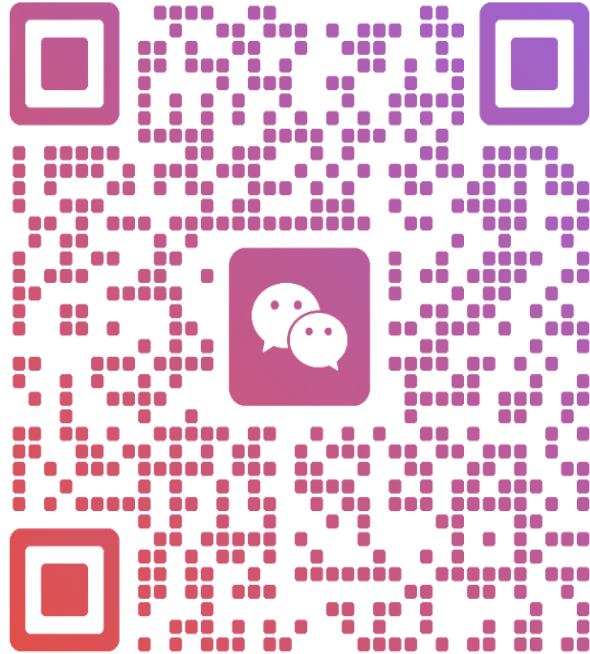
Differential Oculomotor Profiles In Cerebral Small Vessel Disease-related Cognitive Impairment And Alzheimer's Disease

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While saccadic abnormalities were similarly prevalent in both groups, CSVD patients showed distinct worse performance in smooth pursuit and optokinetic nystagmus metrics, indicating multi-domain oculomotor assessment is a non-invasive tool to distinguish CSVD-related cognitive impairment from AD and track disease phenotypes over time.

INTRODUCTION	METHODS	RESULTS	CONCLUSIONS	REFERENCES
To investigate differences in oculomotor function between patients with cognitive impairment due to cerebral small vessel disease (CSVD) and those with Alzheimer’s disease (AD), and to evaluate the potential role of multidomain eye-movement metrics in clinical differentiation.	Twenty-one patients with CSVD-related cognitive impairment (MMSE ≤26, Fazekas score ≥2) and twenty-three patients with Alzheimer’s disease (MMSE ≤26) were enrolled. All participants underwent standardized video-oculography. Recorded parameters included saccadic latency, peak velocity, and accuracy; smooth pursuit (SP) gain at 0.2 and 0.4 Hz and pursuit interruption frequency; and optokinetic nystagmus (OKN) slow-phase velocity, gain, and asymmetry index. Between-group comparisons were performed using t-tests or chi-square tests as appropriate.	Saccadic abnormalities were common in both groups (CSVD 61.9% vs. AD 73.9%, P = 0.39), with slightly poorer saccadic performance in AD that did not reach statistical significance. In contrast, patients with CSVD demonstrated significantly reduced SP gain and increased pursuit interruptions (both P < 0.001). OKN slow-phase velocity and gain were also significantly lower in the CSVD group, accompanied by greater left-right asymmetry (all P ≤ 0.006).	Although both Alzheimer’s disease and CSVD-related cognitive impairment affect saccadic eye movements, CSVD is characterized by a broader oculomotor impairment profile involving smooth pursuit and optokinetic responses. Multidomain oculomotor assessment may provide a useful, non-invasive tool for clinical differentiation and longitudinal phenotyping of cognitive disorders.	Fernández G, et al., Oculomotor Behaviors and Integrative Memory Functions in the Alzheimer's Clinical Syndrome. J Alzheimers Dis. 2021;82(3):1033-1044. CONTACT  Yue Liu, MD Department of Geriatric Neurology Shaanxi Provincial People's Hospital No. 256, Youyi West Road Xi'an 710068, China Tel. +86 2985251331 liuy@spph-sx.ac.cn  ALZHEIMER'S ASSOCIATION AAIC 26