

Brain Risk in Aging Indians & Neurovascular- H-type Hypertension (BRAIN-H study)- Insights from the Longitudinal Aging Study in India



Poster Code: **aaic2026.2e70534**

Thomas Gregor Issac*, Sandhya Gandhi Natarajan, Dwaiti Roy
Centre for Brain Research, Indian Institute of Science

Key takeaway: The prevalence of HTH in a cohort of Indian elderly, LASI-DAD, was observed to be 31.46%, and HTH exhibited significant association with learning and memory domain of cognition. Identification and management of HTH at an early stage are crucial to reduce the burden of cognitive impairment in the elderly.

INTRODUCTION	METHODS	RESULTS	CONCLUSIONS	REFERENCES
• Essential hypertension and hyperhomocysteinaemia together (H-type hypertension [HTH]) is a strong risk factor for cognitive decline¹. • This synergy worsens endothelial dysfunction, neuroinflammation, and the glymphatic system, resulting in white matter hyperintensities and brain atrophy, which are the hallmarks of vascular cognitive impairment. • The study aims to find out the association between HTH and cognition in Indian elderly.	• Data from the Longitudinal Aging Study in India – Diagnostic Assessment of Dementia (LASI-DAD) first wave (2017-20) were utilized for the analysis². • 2463 participants who had available data for HTH were included in the current study. • Mann-Whitney U test was performed due to non-normal distribution, and data were analysed using SPSS v.31.0.	• 775 (31.46%) participants had features of HTH, of which 51.1% were males. • HTH is seen to be associated with increased age ($p < 0.001$). • The HTH group had significantly lower scores in word list learning and word list recall ($p < 0.001$), logical memory test recall ($p = 0.030$) and recognition ($p = 0.005$).	• HTH is a common but poorly regarded entity which is potentially treatable. • It is likely to contribute to cognitive decline in the domain of learning and memory in the elderly. • HTH needs to be studied, especially in Low- and Middle-Income countries (LMICs) like India, where major vascular risk factors are highly prevalent and co-exist.	1. Wei X, et al. "H-type Hypertension Severity and Cognitive Function in Middle-aged and Elderly Chinese People with Hypertension." Chinese General Practice. 2021 2. Lee J et al., Design and methodology of the longitudinal aging study in India-Diagnostic assessment of dementia (LASI-DAD). Journal of the American Geriatrics Society. 2020
				CONTACT Thomas Gregor Issac, thomasgregor@cbr-iisc.ac.in ALZHEIMER'S ASSOCIATION AAIC>26