



## Hippocampal Volume Is Associated with Dementia With Lewy Bodies



A study published online in the journal *Neurology*, a medical journal of the American Academy of Neurology, suggests that lack of shrinkage in the hippocampus may lead to dementia with Lewy bodies (DLB) in people with thinking and memory problems.

DLB is the second leading cause of neurodegenerative dementia in elderly people and is characterised by cognitive decline, REM sleep behaviour disorder, parkinsonism and visual hallucinations. The p.R47H substitution in the triggering receptor expressed on myeloid cells 2 (TREM2) protein is a well-established risk factor for Alzheimer's disease (AD) but has not been evaluated as a possible risk factor for DLB.

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Walton and colleagues assessed the frequency of TREM p.R47H in patients with DLB. More specifically, the researchers used brain MRI scans to measure the size of the hippocampus in 160 patients with mild cognitive impairment. Subsequently, the patients had yearly tests for an average of two years, during which, 38% of them progressed to AD and 13% developed probable DLB. The results should be confirmed with autopsies, as Lewy body disease can only be diagnosed only following death.

The results of the study demonstrated that patients with no shrinkage in the hippocampus were 5.8 times more likely to develop probable DLB than those with hippocampal atrophy. In addition, 85% of patients that had developed DLB had a normal hippocampal volume, whereas 61% of patients that had developed AD had hippocampal atrophy. The association between hippocampal volume and DLB was more pronounced among patients without memory issues. Moreover, the findings of the study suggest that the TREM2 p.R47H substitution is not a risk for DLB, "leaving AD as currently the only neurodegenerative condition showing association with this TREM2 variant."

The current study contributes to the identification of patients with mild cognitive impairment at risk of DLB and

the early diagnosis of DLB, and helps target appropriate treatments.

Source : [Neurology](#)

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