Abstract


Serum 25-Hydroxyvitamin D and Cognitive Decline: A Longitudinal Study among Non-Demented Older Adults.

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BACKGROUND/ AIMS: Very few studies have investigated the longitudinal association between serum levels of 25-hydroxyvitamin D [25(OH)D] and cognitive impairment not due to dementia. This longitudinal study analysed 25(OH)D and the risk of cognitive decline among non-demented older adults.

METHODS: A subsample of the ESTHER cohort study, aged ≥70 years, was assessed with the Cognitive Telephone Screening Instrument (COGTEL) and underwent 25(OH)D measurements standardized with a reference method (n = 1,302). After an average follow-up of 4.6 years, 527 participants had repeated COGTEL testing and were eligible for analysis. Linear regression models were used to assess longitudinal associations between 25(OH)D levels and cognitive function. Possible practice effects of repeated cognitive testing were addressed with the reliable change index.

RESULTS: A trend of a more pronounced cognitive decline with lower vitamin D levels was observed among both women and men, with a statistically significant difference in COGTEL scores in the lowest vitamin D quintile of the total sample.

CONCLUSIONS: This study indicates that low levels of vitamin D might be associated with cognitive decline among non-demented elderly individuals and highlights the need for further large-scale prospective studies to clarify the potential role of vitamin D in cognitive function at an old age.

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