

Changes seen in cerebrospinal fluid levels before onset of Alzheimer dementia

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Cerebrospinal fluid levels of A β 42 appear to be decreased at least five to 10 years before some patients with mild cognitive impairment develop Alzheimer disease (AD) dementia whereas other spinal fluid levels seem to be later markers of disease, according to a report in the January issue of *Archives of General Psychiatry*.

The researchers note as background in the study that disease-modifying therapies, such as immunotherapy, are more likely to be successful if started in the early stages of the disease so there is a need to identify patients with Alzheimer disease before neurodegeneration is not too severe.

Peder Buchhave, M.D., Ph.D, who is affiliated with Lund University and Skane University, Sweden, and colleagues conducted an extended follow-up of the cohort from a previous study of 137 patients with mild cognitive impairment (MCI) at baseline. The median follow-up was 9.2 years.

During the follow-up, 72 patients (53.7 percent) developed AD and 21 (15.7 percent) progressed to other forms of [dementia](#). At the baseline, [cerebrospinal fluid](#) A β 42 levels were reduced and other biomarkers T-tau and P-tau levels were elevated in patients who converted to AD during follow-up compared with levels in patients who did not develop AD.

The study indicates baseline CSF A β 42 levels were equally reduced in patients with MCI who converted to AD within five years (the early converters) compared to those who converted later between five and 10 years. However, T-tau and P-tau levels were significantly higher in early converters compared to later ones.

Researchers suggest that "approximately 90 percent of patients with MCI and pathologic CSF biomarkers at baseline will develop AD within 9.2 years."

"Therefore, these markers can identify individuals at high risk for future AD least five to 10 years before conversion to dementia. Hopefully, new therapies that can retard or even halt progression of the disease will soon be available. Together with an early and accurate diagnosis, such therapies could be initiated before neuronal degeneration is too widespread and patients are already demented," the authors conclude.

More information: Arch Gen Psychiatry. 2012;69[1]:98-106.

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