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Titel des Beitrags:
The Latent Dementia Phenotype ? is Associated with Cerebrospinal Fluid Biomarkers of Alzheimer's Disease and Predicts Conversion to Dementia in Subjects with Mild Cognitive Impairment.

Abstract:
The recently proposed latent variable ? is a new tool for dementia case finding. It is built in a structural equation modeling framework of cognitive and functional data and constitutes a novel endophenotype for Alzheimer's disease (AD) research and clinical trials. To investigate the association of ? with AD biomarkers and to compare the prediction of ? with established scales for conversion to dementia in patients with mild cognitive impairment (MCI). Using data from a multicenter memory clinic study, we examined the external associations of the latent variable ? and compared ? with well-established cognitive and functional scales and cognitive-functional composite scores. For that purpose, logistic regressions with cerebrospinal fluid (CSF) biomarkers and conversion to dementia as dependent variables were performed with the investigated scores. The models were tested for significant differences. In patients with MCI, ? based on a broad range of
cognitive scales (including the ADAS-cog, the MMSE, and the CERAD neuropsychological battery) predicted an abnormal CSF Aβ42/tau ratio indicative of AD (n = 340, AUC = 0.78, p < 0.001), and predicted incident dementia within 1-3 years of follow-up (n = 525, AUC = 0.84, p < 0.001). These associations were generally stronger than for any other scale or cognitive-functional composite examined. Homologs of Aβ based on reduced test batteries yielded somewhat lower effects. These findings support the interpretation of Aβ as a construct capturing the disease-related "essence" of cognitive and functional impairments in patients with MCI and dementia, and suggest that Aβ might become an analytical tool for dementia research.

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