PREDICTIVE VALIDITY AND DIAGNOSTIC STABILITY OF MILD COGNITIVE IMPAIRMENT SUBTYPES

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Background: Mild cognitive impairment (MCI) is subclassified into four subtypes by the presence of impairment in the memory domain (amnestic versus nonamnestic) and the number of impaired cognitive domains (single versus multiple). However, predictive validity for outcomes of these criteria and the diagnostic stability of the subtypes are in question.
Methods: We investigated the outcomes of 140 patients with MCI who participated in the baseline study of the Korean Longitudinal Study on Health and Aging (KLoSHA) and completed 18-month follow-up evaluation (mean duration of follow-up = 1.57±0.24 years). We evaluated the predictive validity of the criteria using multinomial logistic regression analyses, and the diagnostic stability of MCI subtypes using annual conversion rates between subtypes.
Results: Compared with the single domain type (MCIs), the multiple domain type (MCIm) had a lower chance of reversion to normal cognition (MCIm = 10.94%, MCIs = 43.42%) and higher risk of conversion to dementia (MCIm = 23.44%, MCIs = 5.26%). The difference in the reversion rate between the multiple and single domain type was statistically significant (odds ratios = 0.233, 95% CI = 0.070-0.771, P = 0.017). However, neither the chances of reversion nor the risk of conversion was different between amnestic and non-amnestic subtypes. Among the 81 participants who neither converted to dementia nor reverted to normal cognition, 39 converted to different subtype (annual conversion rate = 17.74%).
Conclusions: The number of impaired cognitive domains but not the presence of memory impairment predicted poor outcomes in people with MCI. However, MCI subtype was diagnostically unstable.