IDENTIFICATION OF RISKY MILD COGNITIVE IMPAIRMENT BY MINI-MENTAL STATE EXAMINATION

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We aimed to evaluate whether the performance of the mini-mental state examination (MMSE) could identify risky mild cognitive impairment (MCI). We recruited 122 amnestic MCI-single domain (ASM), 303 amnestic MCI-multiple domains (AMM), and 94 non-amnestic MCI (NAM). Two-step cluster and linear discriminant analyses were used for identifying the clusters of the MMSE with age and education, as well as establishing prediction models for each cluster. Cluster analyses revealed the following three: cluster 1 = 205 AMM (100%); cluster 2 = 61 NAM (33.3%) and 122 ASM (66.7%); and cluster 3 = 33 NAM (25.2%) and 98 AMM (74.8%). Cluster 3 showed a significantly lower ability with regard to orientation to time and place, registration of three words, attention/calculation, language, and copying interlocking pentagons, than clusters 1 and 2. However, for delayed recall, cluster 1 was significantly more impaired than cluster 2. Patients in the clusters 1 or 3 were considered as the risky MCI. This study showed that clustering by performance in the MMSE could help define groups at higher risk for conversion to dementia. Therefore, the MMSE can be considered as a promising screening tool including subtyping for MCI when detailed neuropsychological tests are not feasible.