Subjective memory complaints in normal aging, mild cognitive impairment, and dementia

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Mild cognitive impairment (MCI) represents a transitional state between normal aging and dementia. Subjective Memory Complaints (SMC) are thought to be a core part of criteria for MCI diagnosis. However, there is the inconsistent opinion as to validity of SMC as a criterion for diagnosis. In addition, association of SMC with objective cognitive impairment has not been consistently replicated (Alex, 2008). This study aimed to assess the characteristics of SMC in normal aging, MCI and dementia in Korea.

METHOD

Participants. All of the subjects were community-dwelling Korean elderly aged 65 and older. The subjects consisted of 243, 98 normal, 107, MCI and 38 Dementia patients. A psychiatrist with expert in dementia research made the diagnosis of dementia by doing clinical interviews and reviewing neuropsychological testing data of the subjects. The diagnosis of dementia was also made according to the Diagnostic and Statistical Manual of Mental Disorders, forth edition (DSM-IV, 1994)). The MCI group included SMC self reported and/or confirmed by an informant, and an objective impairment in at least one cognitive domain detected by neuropsychological test with a 1.5-DS cut--off using normative Korean data for age, education years and gender. Severity of dementia was staged using the extended version of Korean Clinical Dementia Rating (CDR) scale. All of the normal elderly were CDR 0, while MCI subjects were CDR 0 or 0.5 or 1, and Dementia patients except for one patient (CDR=3) were CDR 1 or 2.

Procedure. To compare of demographic characteristics among three groups, we used chi-square or Analysis of Variance (ANOVA). And to compare on the score of SMCQ among tree group, Analysis of Covariance (ANCOVA) using age and gender as covariates was calculated. To assess correlations between subjective memory complain and performance of cognitive tests, the participants received Subjective memory complaints Questionnaire (SMCQ), the standardized Korean-version of Neuropsychological Assessment Battery CERAD (CERAD-K-N). And to assess correlations between subjective memory complain and depression, the participants received Geriatric Depressive Scale-Korean-version (GDS-K).

RESULTS

In demographic characteristics, significant group difference in age(ONE-WAY ANOVA, F=12.927, df 2, 238, p<.001) and gender (Peterson Chi-square, p<.005) were identified. But there was no significant difference in educational level. SMC total score (SMCQ-T) was significantly associated educational level (r=−.160, p<.01) and GDS-K (r=047, p<.000).

Significant group differences on SMCQ-T were identified (ANCOVA, F=9.543, df 2, 240, p<.000). As shown in figure 1, in the MCI group SMCQ-T score was significantly higher than others. In Judgment of global memory scale (SMCQ-G), The MCI group’s score was significantly higher than the normal group. In everyday memory scale (SMCQ-E), the normal group’s scores were significantly lower than the compared dementia patient and MCI group. All of cognitive tests performances, except for construction and Trail Making Test A(TMT A), had significant group differences (AONCOVA, F=11.960, df=2, 238, p<.001).

On neuropsychological testing, the normal aging group had the highest score and the dementia group had lowest score on cognitive test performance. In normal aging, the significant correlations between the SMCQ-T and verbal fluency, construction, and verbal/visual delayed recall were found(r = -.225~ -.177, p < .05). In MCI, there was no significant correlation between the SMCQ-T and neuropsychological test. But there was significant correlation between the SMCQ-T and GDS-K (r = .409, p < .01).

DISCUSSION

In our study, MCI group has more complained than the normal group and the dementia patients not only memory problems which is ordinary and judgment of global memory where the insight and subjective judgment are demanded. Even if MCI group showed a low-end accomplishment from the neuropsychological test, there was no significant correlation between the SMCQ-T and Neuropsychological tests. It shows that MCI group is more tend to be devoted in SMC itself than the result of the objective test which like their own cognitive functional accomplishment and further SMC did not directly indicate the objective memory performance in MCI group.

REFERENCES