

P3-108 PROSPECTIVE MEMORY IN MCI AND DEMENTIA: ASSESSMENT METHODS AND COGNITIVE CORRELATES

Claire Thompson¹, Julie Henry¹, Adrienne Withall¹, Peter Rendell², Henry Brodaty¹, ¹University of New South Wales, Sydney, NSW, Australia; ²Australian Catholic University, Melbourne, VIC, Australia.
Contact e-mail: cthompson@psy.unsw.edu.au

Background: Prospective memory (PM) is memory for planned tasks and activities and is important for maintaining functional independence. There is growing evidence that PM declines with age and is impaired in dementia. One way of addressing how early in the disease process PM difficulties arise, and whether the presence of these difficulties has diagnostic significance, is to examine those diagnosed with mild cognitive impairment (MCI), however to date, evidence is mixed regarding PM impairment in MCI. Different methods of assessment of PM are known to yield differing results, with naturalistic measures showing less age-related decline than laboratory measures. This study compares differing methods of assessment of PM in MCI and dementia. Cognitive correlates of PM function (retrospective memory, working memory and executive functioning) are related to PM function in normal adult aging, and are further explored in MCI and dementia in this study. **Methods:** MCI (n = 48), dementia (n = 39) and control participants (n = 53) were compared on Virtual Week, a measure that closely represents the types of PM tasks that actually occur in everyday life, as well as a naturalistic (take-home) PM task, and self- and informant-reports of memory on the Prospective and Retrospective Memory Questionnaire. Cognitive correlates were also assessed. **Results:** Group differences were found between those with MCI, dementia and healthy controls. Dementia participants also had a poorer performance on the naturalistic assessment. Self and informant reports yielded less reliable results than objective assessment. Group differences remain after cognitive correlates are taken into account. **Conclusions:** Prospective memory difficulties are experienced in the everyday lives of people with dementia, and are related to laboratory-based assessments, but do not appear to be evident on a naturalistic task for those with MCI. Group differences in PM remain once cognitive correlates are taken into account.

P3-109 OCCURRENCE OF INTRUSION ERRORS DURING CATEGORY-CUED MEMORY TEST IN EARLY-STAGE ALZHEIMER PATIENTS: THE MECHANISM AND THE RELATIONSHIP WITH DEPRESSIVE TENDENCY

Maiko Nishida¹, Hiroko Yamada², Hajime Takechi¹, ¹Kyoto University, Kyoto, Japan; ²Doshisha University, Kyoto, Japan. Contact e-mail: nmaiko1102@gmail.com

Background: Non-list items referred to as "intrusion errors" in memory recall tests are often observed in Alzheimer's disease (AD). Although intrusion errors were considered as a characteristic of AD, recent studies suggested that the occurrence is similar in other types of dementia. To elucidate the mechanisms, this study (1) compared the occurrence of intrusion errors among AD, MCI, DLB patients and normal controls, and (2) examined the occurrence in the relation to other cognitive tests scores and depression scale scores. **Methods:** Patients with MMSE scores of 18 and above were recruited to this study at memory clinic in a University Hospital during January 2006 to November 2007. The study included 94 participants with age 65 years or older. The average age was 78.8 ± 6.1 . The participants included AD group (N = 45), MCI group (N = 14), DLB group (N = 14), and normal control group (N = 21). Measures: (1) Category Cued Memory Test (CCMT); 16 words memory test with the category cues at acquisition and retrieval, (2) Japanese Geriatric Depression Scale (GDS-15), and (3) Cognitive function tests including MMSE, Block Design Test, Trail Making Test, Clock Drawing Test, and Word Fluency. **Results:** (1) Mean scores of MMSE(SD) were significantly lower in AD, 22.3(2.7), in MCI, 26.1(1.8) and in DLB, 24.3(2.9) than in normal controls, 28.8(1.3). Mean scores of CCMT (SD) were significantly lower in AD, 3.8(2.2), and in DLB, 6.1(3.2), than in normal, 8.7(3.1). Mean scores of intrusion errors in

CCMT (SD) were higher in AD, 5.4(5.5), than in normal, 1.7(1.6). (2) Among patients with AD, occurrence of intrusion errors had no significant correlation with scores of cognitive function tests including MMSE. However, intrusion errors in patients with AD were negatively related with depressive tendency; GDS-15 ($r = -0.34$, $p < 0.05$). **Conclusions:** Intrusion errors occurred significantly more in early stage AD patients than in normal controls. The occurrence was negative correlation with the score of GDS-15. Occurrence of intrusion errors might be intervened by depressive tendency of early stage AD patients.

P3-110 NEUROPSYCHIATRIC SYMPTOMS IN AMNESTIC AND NONAMNESTIC MILD COGNITIVE IMPAIRMENT

Mun Seong Choi, So Yeong Kim, *Maryknoll Hospital, Busan, Korea.*
Contact e-mail: muschoi@chollian.net

Background: The information regarding neuropsychiatric symptoms in the subtypes of mild cognitive impairment (MCI) is inadequate. To describe the behavioral neuropsychiatric symptoms of MCI in two subgroups of MCI patients with different neuropsychological characteristics. **Methods:** MCI patients are classified as amnesic (aMCI) if they have a prominent memory impairment, either alone or with other cognitive impairments (multiple domains with amnesia), or nonamnesic (naMCI) if a single nonmemory domain is impaired alone or in combination with other nonmemory deficits (multiple domains without amnesia). The K-Neuropsychiatric Inventory (NPI) was administered to detect behavioral and psychological disturbances observed by the caregiver. **Results:** 58 subjects were analyzed: 43 were classified as aMCI and 15 as naMCI. About 76% of MCI patients had some neuropsychiatric symptoms evaluated with the NPI and the most prevalent symptom was depression, followed by anxiety & apathy. A significantly higher prevalence of hallucinations has been observed in the naMCI group in comparison with the aMCI group. **Conclusions:** Neuropsychiatric symptoms occur in the majority of persons with MCI. A significantly higher prevalence of hallucinations has been observed in the naMCI group in comparison with the aMCI group. Neuropsychological & behavioral assessment is considered as an important step in the categorization of subjects with MCI.

P3-111 USEFULNESS OF LOGICAL MEMORY II OF WMS-R IN MEMORY CLINIC OUTPATIENTS

Takumi Hori, Nobuo Sanjo, Mutsufusa Watanabe, Hiromi Utashiro, Hidehiro Mizusawa, *Tokyo Medical and Dental University Graduate School of Medical and Dental Science, Department of Neurology and Neurological Science, Tokyo, Japan.* Contact e-mail: takunuro@tmd.ac.jp

Background: Screening and detection of memory disturbance, which is a core symptom of dementia, is important for the diagnosis of Alzheimer's disease (AD) and mild cognitive impairment (MCI). However, it is sometimes difficult to detect mild dementia only with MMSE. Several studies have reported that Logical Memory II test (a measure of delayed recall) (LMII) of Wechsler Memory Scale-Revised (WMS-R) is sensitive to evaluate whether those patients have a memory disturbance or not, and to make a diagnosis of mild dementia, especially MCI or early AD. We have evaluated LMII in Japanese memory clinic outpatients. **Methods:** A retrospective, single center, longitudinal cohort study. Eighty-two patients who got 24 points or more in MMSE were analyzed among 131 outpatients coming to the memory clinic to whom both MMSE and WMS-R had been tested, for the period of two years and eight months. The NINCDS-ADRDA criteria was used for a diagnosis of probable AD, MCI was diagnosed with CDR 0.5. All participants gave informed consent. **Results:** Final diagnosis of the patients were 28 of non-dementias [ND], 19 of MCI [MCI], 23 of AD [AD], and 12 of other dementias [OD]. The average of MMSE was [ND] 27.9, [MCI] 27.3, [AD] 25.5, and [OD] 27.2 points, and [AD] was significantly lower than other groups. The average of LMII was [ND] 14.3, [MCI] 5.5, [AD] 4.2, and [OD] 6.7 points, and [ND] was significantly higher than other groups. During observation period, seven patients of [MCI] converted to AD, and the conversion rate was 26.3%/year. In the conversion group, LMII was significantly low than that of non-conversion group. In