

MoCA, and AVLT at follow-up were higher ( $0.69 \pm 4.13$ ,  $0.51 \pm 4.61$ , and  $0.53 \pm 1.94$ , respectively) than the baseline variables in the MCI group who remained as MCI in clinical status, though the differences were not significantly different. (3) The MMSE, MoCA, and AVLT at follow-up decreased significantly ( $-5.54 \pm 4.31$ ,  $-5.57 \pm 4.43$ , and  $-1.80 \pm 2.29$ , respectively) when compared with the baseline variables in the normal control group who progressed to dementia. The MMSE, MoCA and AVLT at follow-up decreased significantly ( $-3.41 \pm 3.56$ ,  $-3.44 \pm 4.56$ , and  $-1.76 \pm 2.18$ , respectively) when compared with the baseline variables in the normal control group who progressed to MCI. The MMSE, MoCA, and AVLT at follow-up were higher ( $0.09 \pm 3.57$ ,  $0.68 \pm 4.30$ , and  $0.47 \pm 2.17$ , respectively) than the baseline ones in the normal control group who remained clinically normal, though the differences were not statistically significant.

**Conclusion:** The speed of cognitive decline was significantly accelerated when the elderly departed from normal ageing and progressed to MCI and dementia.

## Age, Education, and Cognitive Decline — a Prospective Study of Cognitive Function in Community-dwelling Chinese Older Adults in Hong Kong

F2.2.8

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**Background:** This study aimed to investigate the changes in cognitive profiles and the effect of age and education on such changes in an older community cohort over a 5-year period.

**Methods:** A random sample of 787 non-demented Chinese elders in Hong Kong was assessed with a comprehensive neuropsychological battery at baseline, in the 2nd and 5th year.

**Results:** A total of 454 subjects were assessed at the 5th year. For subjects with normal cognitive function at baseline, 186 (56.9%) remained cognitively normal, 115 (35.2%) had mild cognitive impairment (MCI), and 26 (7.9%) became demented. For subjects with MCI at baseline, 28 (22%) reverted to normal, 59 (46.5%) remained as MCI, 40 (31.5%) became demented. The decline in scores of Cantonese Mini-Mental State Examination was significant over the years, with the rate of decline being greater after the 2nd year. Using logistic regression, age and education had significant predictive effects on the progression to dementia, but the protective effect of education was lost if the subjects were already suffering from MCI at the baseline. Age was a significant factor affecting the cognitive function over time, while the effect of education was lost in the baseline MCI subjects.

**Conclusions:** A decline in cognitive profile took place before the clinical diagnosis of dementia. The protective effect of education on cognitive function appeared to have lost when the person started to have MCI.

## Cerebrospinal Fluid Cystatin C Levels are Decreased in Alzheimer's Disease

F2.2.9

## and Dementia with Lewy Bodies

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**Objective:** Amyloid plaque is a neuropathological hallmark of Alzheimer's disease (AD), and it is also present in the majority of patients with dementia with Lewy bodies (DLB). Recently, cystatin C (CysC) has been shown to bind soluble amyloid- $\beta$  ( $A\beta$ ) peptides and inhibit its aggregation in a concentration-dependent manner in vitro. It suggests that CysC levels may be altered both in AD and DLB. Studies of CysC levels in cerebrospinal fluid (CSF) in relation to AD are conflicting and the relation between CysC and DLB is unknown. The present study aimed to evaluate the CysC levels in both AD and DLB and to explore the potential links between the quantified CSF levels of CysC and the established AD biomarkers ( $A\beta$  and tau).

**Methods:** A total of 99 subjects (43 AD, 26 DLB, and 30 normal controls) were recruited. Serum and CSF CysC concentrations were quantitatively measured by a latex immuno-turbidimetric assay using CysC reagents (Dako, Denmark) with an auto-analyser. Levels of  $A\beta_{42}$ , total tau, and phosphorylated tau at threonine 181 (p-tau181) in CSF were quantified with enzyme-linked immunosorbent method (Innogenetics, Belgium).

**Results:** Our results showed that mean serum CysC levels were similar among the 3 groups. CSF CysC levels were significantly lower in patients with AD ( $3.57 \pm 1.23$  mg/l,  $p < 0.001$ ) and DLB ( $3.31 \pm 0.73$  mg/l,  $p < 0.001$ ) than in normal controls ( $5.09 \pm 1.36$  mg/l). CSF CysC levels were positively correlated with CSF p-tau181 and  $A\beta_{42}$  levels in AD (p-tau181:  $r = 0.408$ ,  $p = 0.007$ ;  $A\beta_{42}$ :  $r = 0.324$ ,  $p = 0.034$ ), normal controls (p-tau181:  $r = 0.575$ ,  $p = 0.001$ ;  $A\beta_{42}$ :  $r = 0.507$ ,  $p = 0.004$ ) and the total sample (p-tau181:  $r = 0.240$ ,  $p = 0.017$ ;  $A\beta_{42}$ :  $r = 0.595$ ,  $p < 0.001$ ), but not in DLB (p-tau181:  $r = 0.245$ ,  $p = 0.227$ ;  $A\beta_{42}$ :  $r = 0.037$ ,  $p = 0.859$ ).

**Conclusions:** CSF CysC levels were decreased in both AD and DLB, but there might be some other pathological events in DLB that interfered with the interaction between CysC,  $A\beta$ , and tau.

## FREE PAPER 3.1 – Neuroscience and Mental Health

### Directions for Community Psychiatry in the United States: a Pilot Qualitative Study

F3.1.1

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**Background:** Community psychiatry is at a crossroads in the U.S.. This crisis can be characterised, in part, by the discipline's relationship to: tension between social and biological psychiatry, and the Recovery Movement. Confronted with the strong presence of biological psychiatry, with social conditions that often are not a core focus of their training, and with a strong push from patients, advocates, and some policy makers to create recovery-oriented care