Association of neuropsychiatric symptoms and sub-syndromes with cognitive impairment in community-dwelling Asian elderly

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ABSTRACT

Objectives: To investigate the presence of neuropsychiatric symptoms (NPS) and sub-syndromes in elderly community-dwelling Asians with varying severity of cognitive impairment.

Methods: Chinese and Malay participants (n=613) from the Epidemiology of Dementia in Singapore (EDIS) Study aged ≥60 years underwent clinical examination, neuropsychological testing, and NPS assessment using the Neuropsychiatric Inventory (NPI). Diagnosis of no cognitive impairment (NCI), cognitive impairment-no dementia (CIND), including CIND-mild and CIND-moderate, and dementia were made using established criteria.

Results: A significant increase in the numbers of NPS was observed accompanying with increasing severity of cognitive impairment (p<0.001). Compared to those with NCI/CIND-mild, participants with CIND-moderate [Odds ratio (OR): 4.2, 95% confidence interval (CI): 1.8–10.0] or dementia [OR: 9.2, 95% CI: 2.3–36.0] were more likely to have two or more neuropsychiatric sub-syndromes. Participants with CIND-moderate were more likely to have hyperactivity [OR: 2.0, 95% CI: 1.0–3.8] and apathy [OR: 2.9, 95% CI: 1.0–8.4] sub-syndromes, whereas patients with dementia were more likely to have psychosis [OR: 6.9, 95% CI: 2.4–20.1], affective (OR: 8.7, 95% CI: 1.8–42.9), and hyperactivity (OR: 5.4, 95% CI: 1.8–16.1). Furthermore, executive dysfunction and visual memory impairment were associated with the presence of three neuropsychiatric sub-syndromes; whist language and visuomotor speed impairment were related to the presence of two sub-syndromes. By contrast, impairment in attention, verbal memory, and visuoconstruction were not associated with any of the sub-syndromes.

Conclusions: The presence of NPS and sub-syndromes increase with increasing severities of cognitive impairment, and different neuropsychiatric syndromes are associated with specific impairment on cognitive domains in community-dwelling Asian elderly.

Key words: neuropsychiatric symptoms, sub-syndromes, community dwelling, Asian

Introduction

With rapidly aging populations, dementia has become a serious public health concern, particularly in Asia (Catindig et al., 2012). Patients with dementia are reported to display more neuropsychiatric symptoms (NPS), which become more severe as the disease progresses (Lyketsos et al., 2000; Shinosaki et al., 2000). NPS in dementia significantly increase caregivers’ burden and are associated with earlier institutionalization and worse prognosis (Steele et al., 1990; Paulsen et al., 2000). In addition, NPS can have negative consequences for people with dementia, as these symptoms are...