

LETTERS

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Behavioral and psychological symptoms among Indian patients with mild cognitive impairment

Behavioral and Psychological Symptoms of Dementia (BPSD) are common in dementias but is a relatively new entity described in patients with Mild Cognitive Impairment (MCI). The International Psychogeriatric Association Consensus Group defines BPSD as “symptoms of disturbed perception, thought content, mood or behavior” (Coen *et al.*, 1997). The present study was aimed at assessing the frequency of the same in patients with MCI.

The study was carried out in the Memory Clinic of the Neurology Department of a Tertiary Care Centre, in the Northern India. Patients were chosen randomly and followed up prospectively. They were assessed in detail for their memory complaints. Total number of elderly with memory complaints during the study period (August–December, 2013) was 192. Out of them 26 patients who met the Petersen’s Criteria for MCI (Petersen, 2009) were selected. They were assessed for the presence of BPSD using the Behavioral Pathology in Alzheimer’s Disease Rating Scale (BEHAVE-AD).

The mean age of all patients with MCI was 70.7 ± 7.9 years. Average duration of illness was 3.6 ± 2.7 years. We found a total of 7 patients (M:F = 6:1) with BPSD out of 26 (27%). BPSD were defined as per BEHAVE-AD scale, which is a screening instrument for the evaluation of behavioral disturbances in patients with Alzheimer’s disease (AD). Global rating is given at the end of this scale and is rated as (0) for no trouble/dangers to caregivers, (1) for mild, (2) for moderate, and (3) for severe troubles/dangers. Mode of global rating of all patients in present study was (0), which means, no trouble/dangers to caregivers.

BPSD

The caregivers of five patients with BPSD complained of aggressive behavior and use of abusive language towards caregivers and two of them had depression and affective disturbances. None of the patient was getting antipsychotic medications at the time they were evaluated. An attempt was made to explore the associated factors e.g. vascular factors with MCI with or without BPSD.

A comparison of MCI patients with BPSD was made with regard to presence of hypertension and

diabetes. There were three patients with diabetes in the BPSD and four in the without BPSD category.

Similarly, there were five patients with hypertension in the BPSD category and two in the without category. A comparison of independent variables was done using Fisher’s exact test. The difference on χ^2 test was insignificant for hypertension as well as diabetes (p -value > 0.05). Mini-Mental Status Examination (MMSE) scores were not significantly different for patients with or without BPSD on unpaired t-test ($p > 0.05$). Pearson Correlation Coefficient (r) for association between duration of illness and MMSE scores was weak but positive (0.33).

A previous study showed that mood disorders, anxiety, and agitation were present in both amnesic-MCI and AD, though psychotic symptoms were observed mainly in AD patients. The study also concluded that BPSD is likely to be present since earliest stages of AD (Serra *et al.*, 2010). It has correlated atrophy in various areas of the brain in patients with AD and BPSD and suggested that delusional patients are more likely to have involvement of the right hippocampus. Caregiver burden increases with increasing severity of cognitive impairment and with the presence of BPSD (Hashidate *et al.*, 2012).

Caregivers’ burden in AD has been correlated with the presence of BPSD (Dhikav and Anand, 2012). It would be interesting to know as to what extent, the presence of BPSD in MCI would contribute to the caregiver burden. It has been found that younger age, male gender, and lower education status are associated with a higher prevalence of behavioral abnormalities in patients with MCI.

Being married has a protective influence against psychotic behavior (Apostolova *et al.*, 2014). It has also been shown previously that patients with the amnesic type of MCI had more elation and agitation relative to non-amnesic. The present small study shows that BPSD in MCI is a common entity and that it should receive appropriate social and medical attention.

Conflict of interest

None.

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Mild cognitive impairment in Parkinson's disease and vascular risk factors among Indian patients

Mild cognitive impairment (MCI) is often defined as subjective memory complaints with intact activity of daily living without dementia. Its association as a precursor to Alzheimer's disease is well known. However, MCI in Parkinson's disease (PD) is poorly understood. The present small study aimed to measure the frequency of MCI and vascular factors in Indian patients with PD.

MCI in PD is an evolving concept. It is well known that it could be a potential predictor for future cognitive decline and dementia in patients with subsequent Alzheimer's disease. A considerable number of patients with PD are being diagnosed as PD with MCI (PD-MCI). MCI is common in PD patients without dementia and may be a harbinger of dementia (Hanna-Pladdy *et al.*, 2013).

The Movement Disorder Society Task Force concluded that PD-MCI is common in patients without dementia (mean prevalence, 27%; range, 19%–38%) and is associated with the subsequent development of Parkinson disease dementia (PDD).

The clinical profile of PD-MCI is heterogeneous, with a range of cognitive domains affected. Overall, non-amnesic, single-domain impairment (i.e. any single non-memory domain) is the most common subtype of PD-MCI (Litvan *et al.*, 2012).

The present study was aimed at assessing the frequency of MCI and vascular factors (i.e. diabetes and hypertension) in patients with PD. The results were compared to a group of patients diagnosed with MCI in the absence of PD.

This study was conducted at Post Graduate Institute of Medical Sciences and Research and Dr. RML Hospital, a Tertiary Care center in New Delhi, India. A total of 50 patients were selected randomly from patients presenting to the Department of Neurology and reporting to the Movement Disorder Clinic with a diagnosis of PD and evaluated with regard to subjective memory complaints. Evaluation of MCI was done using the Petersen's criteria for MCI (Petersen, 2009). Also a separate comparison group ($n = 26$), presenting to the Memory Clinic with the diagnosis of MCI was enrolled and patients were incorporated randomly in this group as well.

A total of 14 patients out of 50 (28%) with PD met Petersen's criteria for MCI. Mean age of patients with PD with MCI was 67.34 ± 9.74 years and 71.19 ± 8.14 years for the comparison group with MCI alone. There was no statistically significant difference between these groups with regard to their mean ages (p value > 0.05).

Hoehn–Yahr staging was performed for patients with PD ($n = 46$). The Mean Staging Score of those with MCI-PD ($n = 12$) was 2.54 ± 0.96 and of those with PD without MCI was 1.62 ± 1.01 ($n = 34$) and paired t -test showed that both groups differed significantly (p value $= < 0.05$).

Prevalence of vascular risk factors i.e. diabetes and hypertension in both groups, i.e. PD-MCI ($n = 14$) and MCI alone ($n = 26$) was made. In the comparison group with MCI, there were a total of 6 patients with diabetes and 16 patients with hypertension out of a total sample size of 26. In the group of patients with PD, out of a total of 14 patients with PD-MCI, 7 had hypertension and 3 had diabetes. An attempt was made to know if the frequency of diabetes and hypertension differed in patients with MCI and those with PD and MCI.