

BEHAVIORAL AND PSYCHOLOGICAL SYMPTOMS IN DIFFERENT SUBTYPES OF COGNITIVE IMPAIRMENT

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Objectives and Purpose: The study was aimed to investigate the clinical pattern associated with BPSD and mood symptoms preceding the onset of dementia.

Materials and methods: All patients with a diagnosis of dementia or mild cognitive impairment (MCI) attending the Alzheimer's Disease Evaluation Unit of the Hospital of L'Aquila between January 2014 and May 2015 for neuropsychological evaluation, were included in the study. All subjects underwent a full clinical, neuropsychological, and neuroimaging evaluation. Mood disorders preceding the onset of dementia were assessed on the basis of clinical diagnoses or drug prescriptions. Neuropsychological evaluation included Mini Mental State Examination (MMSE), Mental Deterioration Battery, Activities of Daily Living (ADL) and Instrumental Activities of Daily Living (IADL). BPSD were systematically screened by using the Neuropsychiatric Inventory and were grouped into hypoactive and hyperactive symptoms.

Results: 109 patients meeting the inclusion criteria, 32 men (29.4%) and 77 women (70.6%), with a mean age (\pm SD) of 74.6 (\pm 6.7) were included in the study. Seven patients (6.4%) had MCI, 48 (44%) dementia of Alzheimer's type, 43 (37.5%) vascular dementia and 11 (12.1%) other types of dementia. The BPSD with the highest prevalence were depression (44%), anxiety (23.9%), and hallucinations (11%). MMSE scores at baseline were higher in subjects with MCI (26.83) than in those with vascular (22.4) or Alzheimer's type (20.33) dementia. However, at the end of follow-up, MMSE scores were only marginally decreased in patients with MCI (26.0) but were significantly reduced in those with vascular (18.64) and Alzheimer's type (16.7) dementia. Mood disorders before onset of cognitive impairment were more common in patients with vascular dementia and in those with coexisting Parkinsonism. Subjects with mood symptoms preceding the onset of cognitive impairment showed a higher score on temporal orientation at baseline (3.27 vs 2.07; $P=0.04$) but an inverse trend at follow-up (2.08 vs 1.2; $P=0.18$).

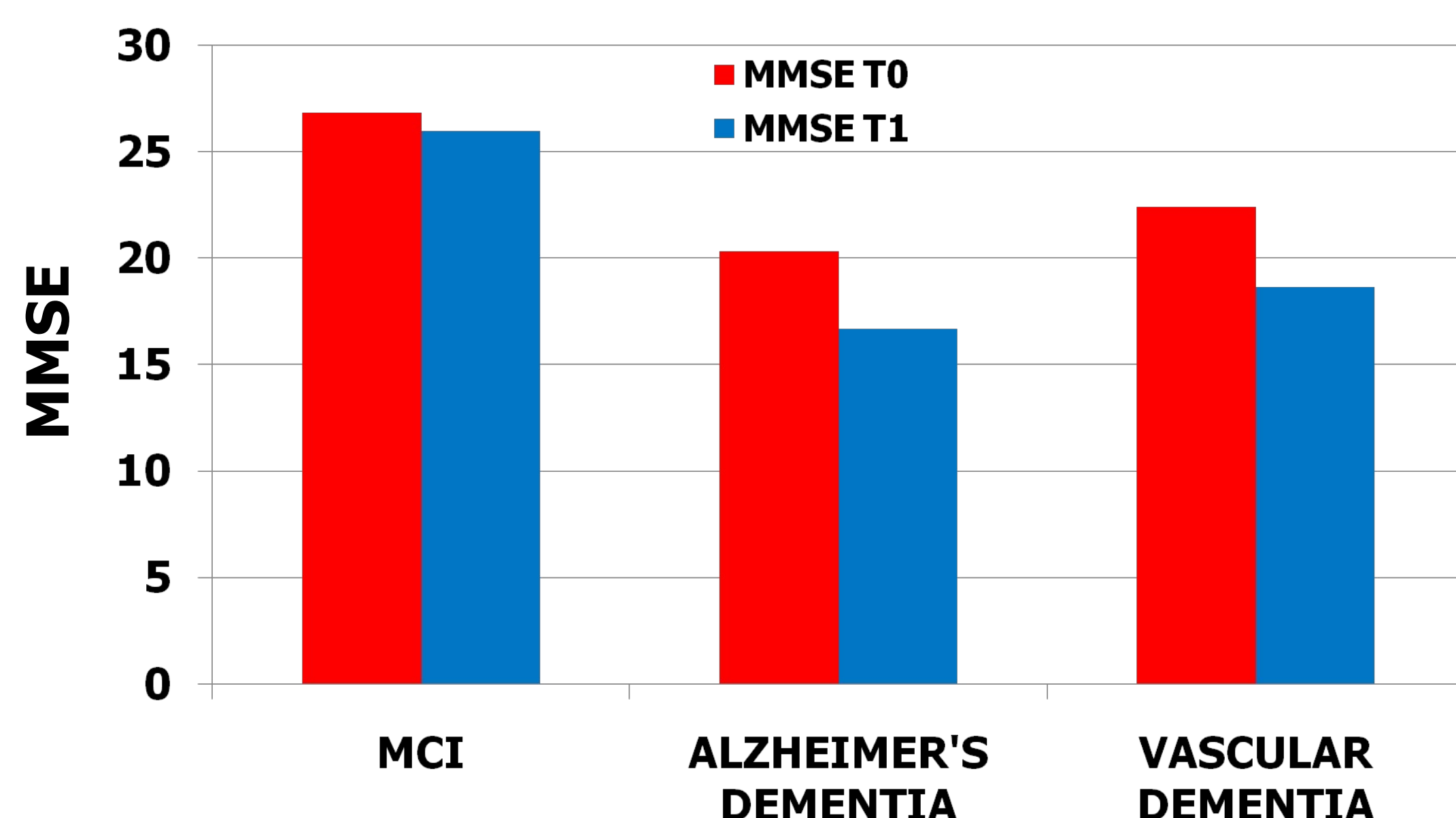


FIGURE 1. MMSE scores and subtypes of cognitive impairment at baseline (T0) and follow-up (T1) in patients with BPSD.

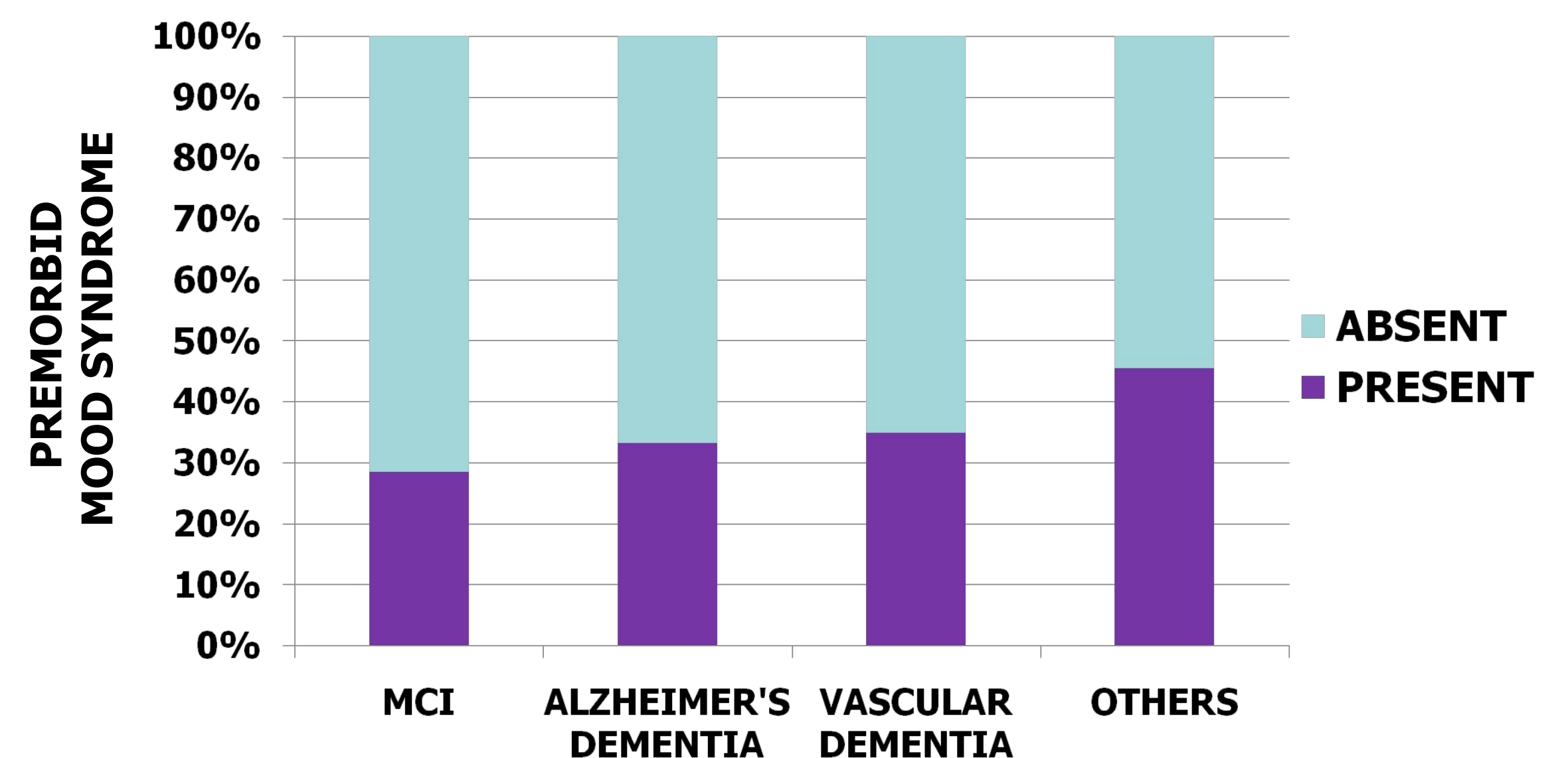


FIGURE 2. Percentage of presence and absence of premorbid mood syndrome in patients with different subtypes of dementia.

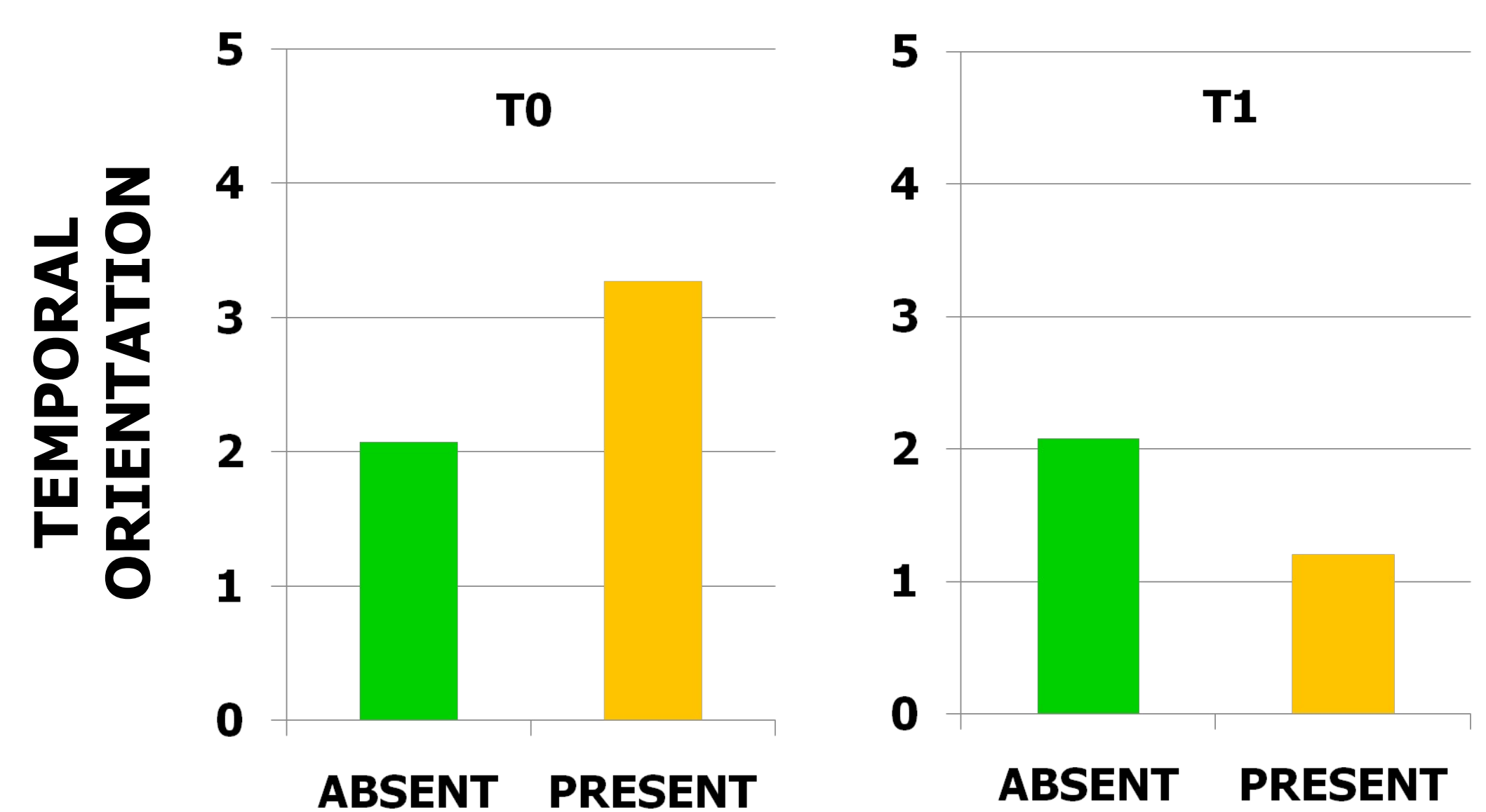


FIGURE 3. Temporal Orientation Test's scores and premorbid mood disorders at baseline (T0) and follow-up (T1).

Discussion: Our data suggest that different subtypes of cognitive impairment have different progression rates and different risk of BPSD. Mood symptoms before onset of cognitive impairment are more common in patients with vascular pathology and in patients with coexisting Parkinsonism. Interestingly, these patients have better performance on temporal orientation tasks, but they showed a faster impairment and lower scores at follow-up. BPSD and mood symptoms before onset should be considered different aspects of the clinical pattern, possibly involving different anatomo-physiological pathways.

Conclusion: BPSD and mood symptoms preceding the onset of cognitive impairment are relevant to the progression of the disease, although they show different patterns of association.

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