



Does cognitive dysfunction conform to a distinctive pattern in obstructive sleep apnea syndrome?

[Antonelli Incalzi R](#), [Marra C](#), [Salvigni BL](#), [Petrone A](#), [Gemma A](#), [Selvaggio D](#), [Mormile F](#).

Department of Gerontology, Università Cattolica del Sacro Cuore Geriatric Outpatient
Department ASL RM E, Rome, Italy.

Obstructive sleep apnea (OSA) is a recognized cause of cognitive dysfunction. By using a cross-sectional comparative study, we aimed to verify whether neuropsychological performance of untreated OSA patients conforms to a distinctive pattern. Forty-nine newly diagnosed, untreated OSA patients, 27 with multi-infarctual dementia (MID), 31 with mild to moderate dementia of Alzheimer type (DAT) and 63 with severe chronic obstructive pulmonary disease (COPD), all free from major comorbid dementing conditions were chosen for the study. The groups were matched for age and education. We found a bimodal distribution of cognitive performance in OSA group, which was therefore divided into two clusters having better (OSAb, n = 35) and worse (OSAw, n = 14) performance on a battery of 10 cognitive indexes. Cognitive performances of OSAb, OSAw, MID, DAT and COPD were compared by discriminant analysis. OSAb performed better than OSAw in all but one test. Deductive thinking and verbal attainment were more severely impaired in OSAw than in COPD patients. Constructive ability, deductive thinking and both verbal attainment and immediate memory were comparably impaired in OSAw and DAT. The mean neuropsychological scores of OSAw and MID were comparable, but 71% of OSAw patients had a distinctive cognitive profile, i.e. a group specific pattern of cognitive dysfunction, according to discriminant analysis. One of four newly diagnosed OSA patients had a severe and distinctive neuropsychological dysfunction mainly involving inductive and deductive thinking, and constructive ability. Some analogy with cognitive pattern of MID suggests that a mainly subcortical damage underlies this dysfunction.

PMID: 14996039 [PubMed - indexed for MEDLINE]