

Letter on the Published Article “Chronic Respiratory Diseases and Neurodegenerative Disorders: A Primer for the Practicing Clinician”

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Dear Editor,

I read with great interest the article titled “Chronic Respiratory Diseases and Neurodegenerative Disorders: A Primer for the Practicing Clinician” by Falsetti et al. [1]. The authors reviewed the relationship between chronic respiratory disorders and chronic neurodegenerative diseases with special reference to risk factors and interactions of these two disorders. Chronic hypoxia is the important factor for the pathogenesis of neurodegenerative disorders, expressing cognitive impairment, and obstructive sleep apnea syndrome (OSAS) is the major chronic hypoxia-causing disorder. To specify the underlying mechanisms, amyloid β metabolism, tau phosphorylation, inflammation, and oxidative stress have been considered as the cause of neurodegeneration in the brain [2]. I have a comment regarding the study with special reference to OSAS treatment and cognitive impairment.

Liguori et al. [3] evaluated the long-term effects of continuous positive airway pressure (CPAP) treatment in patients with OSAS and mild cognitive impairment or Alzheimer’s disease (AD). Significant worse cognitive and functional performances were observed in patients with the CPAP nonadherent group. By keeping a stable estimation, Dunietz et al. [4] reported with an enough number of samples that CPAP adherence was significantly as-

sociated with lower odds of incident diagnoses of AD. Although these two papers adopted a retrospective study design, CPAP treatment was effective to reduce the risk of cognitive and functional performances.

On the contrary, Fernandes et al. [5] reviewed the association between OSA and risk of dementia to specify whether OSA is a risk factor for developing mild cognitive impairment and AD in the middle-aged and older populations. There were inconsistent results regarding the effectiveness of CPAP treatment to suppress the progression of cognitive decline in AD patients and delaying effect of the conversion to AD in MCI patients. Intervention studies are needed to verify the causal association.

Conflict of Interest Statement

The author has no conflicts of interest to declare.

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