

Is obstructive sleep apnea an important risk factor for dementia?

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Obstructive Sleep Apnea Syndrome (OSAS) is characterized by episodes of upper airway obstruction during sleep that results in intermittent hypoxemia and arousal. OSAS causes hypoxia and also decrease the quality of sleep because the sleep is fragmented. Overtime OSAS determine daytime sleepiness, cognitive dysfunctions and functional decline. The progression of subsequent functional decline may induce over time dementia. The underlying brain damage results from heterogeneous processes including reduced cerebral blood flow, ischemic brain lesions, white and grey matter lesions and loss. The neuropsychology of cognitive impairment in OSAS is still under investigation. The first domains involved include attention, executive functioning and motor control but on long term also long-term episodic memory is affected. Several studies involving total sleep loss, sleep reduction and clinically related sleep fragmentation report impaired performance on tasks of frontal lobe function. The mechanisms of OSA-cognitive impairment association are probably not only degenerative. Recent studies show that dementia risk is higher in subjects with OSAS and vascular changes and the severity of cerebrovascular impairment was related to the severity of OSAS. Medications as antipsychotics, narcotics, and anxiolytics could increase the risk of cognitive impairment are subjects with OSAS. CPAP therapy should be therefore considered for OSA both in subjects with MCI and with dementia.