

Sleep Apnea – A Psychological, Neurological and Suicidal Agent



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Abstract

Sleep apnea has been causing grave physiological, psychological, behavioral and neurological consequences. Though immense number of people have been suffering from sleep apnea, its pathological hallmarks and amendment strategies have remained overlooked. Co-morbidities of sleep apnea has not received considerable attention. Thus, this article has been aimed at elucidating the psychological, neurological and suicidal co-morbidities of sleep apnea. Health care professionals, policy-makers, public health researchers and scientists of diverse field would be highly benefitted from the viewpoints described in this article.

Keywords: Central sleep apnea; Obstructive sleep apnea; Neurodegeneration; Alzheimer's disease; Parkinson's disease; Suicide

Abbreviations: OSA: Obstructive Sleep Apnea, CSA: Central Sleep Apnea; ND: Neurodegenerative Diseases; ROS: Reactive Oxygen Species; AD: Alzheimer's Disease; PD: Parkinson's DiseaseTherapy

Psychological, Behavioral, Neurological and Suicidal Co-Morbidities of Sleep Apnea

Sleep apnea is a physiological disorder that occurs during sleep and causes respiratory pauses [1]. The person undergoing sleep apnea suffers from collapsing of the upper respiratory airway that results in poor or blocked breathing, cessation in breathing and disturbed sleeping [1]. Choking and snoring accompany breathing and sleeping disturbance [1]. As proper sleeping and oxygenation becomes hampered, the sleep apnea patient suffer from feelings of excessive sleeping during daytime, weakness and other physical and psychological problems [1]. Globally, more than 936 million people suffer from sleep apnea and most of them have been found with obstructive sleep apnea (OSA) [2]. Besides, another type of sleep apnea, called central sleep apnea (CSA) occurs due to neurological failure on breathing control [3-10]. Most common psychological hallmarks of sleep apnea are anxiety, depression, irritation, lethargy, laziness, schizophrenia, aloofness and stress [3-10]. Though different physiological and psychological problems have been associated with sleep apnea, its link with neurodegenerative diseases (ND), cognition, learning and memory have been less discussed [3-12]. This article intricately links the relationship between these physiological abnormalities along with suicide. Cognitive performance include

attention, language, learning, memory, thinking, planning, problem solving and other executive functioning abilities [3-12]. OSA impairs almost all the cognitive aspects of the sufferers. OSA induced hypoxia (blood level of reduced oxygen) and hypercapnia (blood level of increased carbon dioxide) alter normal metabolic and physiological processes [3-12].

Also, enhanced level of reactive oxygen species (ROS) impairs cellular functioning. OSA stimulates excessive generation and accumulation of amyloid beta (A β) plaque and thus is directly linked with Alzheimer's disease (AD) [10-12]. Neuroimaging studies of the OSA patients revealed abnormal grey matter structure linked with those of the AD patients [10-12]. Sleep apnea also stimulates Parkinson's disease (PD) generation [13-17]. Painstakingly, sleep apnea also sets the ground of suicide [18-23]. Suicidal ideations have been linked with sleep apnea in multiple studies [18-23]. Thus, management of sleep apnea is essential to reduce neurodegenerative diseases, cognitive impairments and suicidal tendencies or suicide.

Conclusion

Sleep apnea has been plaguing the humanity in the guise of a silent killer. Its management strategies should be disseminated

to the community so that the sufferers find easy way to sustain and lead their normal life. Awareness programs against the grave consequences of sleep apnea including psychological, behavioral, neurological and suicide should be raised globally. Policy-makers at national and international levels should formulate strategies to combat sleep apnea.

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