



Supplemental Oxygen and Sleep Related Hypoxemia During Night

Navyasree Nuthalapti *

Introduction

People suffering from obstructive sleep Apnea have intermittent oxygen desaturation with periods of Apnea or hypopnea. Oxygen saturation levels below ninety are considered harmful. Usually Apnea which turn into hypoxemia. Unfortunately, for nasal continuous positive airway pressure (CPAP) or surgical correction for OSA is not used. Three types of sleep-disordered breathing are obstructive sleep Apnea syndrome, Cheyne–Stokes respiration and central sleep Apnea in chronic heart failure, and obesity hypoventilation syndrome, three conditions hypoxia appears to affect body functioning in different ways. Mostly there are molecular and cellular mechanisms that occur in response to SDB-related hypoxia. During OSAS, most organ, tissue or functional impairment is to the severity of nocturnal hypoxia, OHS is a growing health concern, owing to the worldwide obesity epidemic and OHS morbidities OSAS is defined by symptoms such as excessive daytime sleepiness (EDS) and daytime functioning impairment, occurring during sleep. The scoring of ventilator events includes Apnea, hypopneas and also episodes of increased upper airway resistance that this latter type of event should be included in OSAS.

Description

Intermittent hypoxia- The desaturation oxygenation sequence is a typical pattern with the majority of respiratory events. Leading to oxidative stress, with production of reactive oxygen species the increased levels of ROS contribute to the generation of adhesion molecules, activation of leukocytes and production of systemic inflammation these mechanisms generate vascular endothelial damage and dysfunction. High sympathetic output found in OSA, leading to insulin resistance Nitric oxide derivatives include the nitrosonium ion (NO⁺), which results from the auto-oxidation of nitric oxide under certain conditions, and peroxynitrite (ONOO⁻), which is the product of the reaction between nitric oxide and the superoxide ion (O₂⁻), since peroxynitrite is generated in situations associated with increased oxidative stress, e.g. hypoxia and ischemia–reperfusion, particularly at the level of the vascular wall. Gas exchange during sleep severely affect in certain people, especially in those who are grossly obese or have chronic respiratory disorders, such as chronic obstructive pulmonary disease (COPD).

Citation: Nuthalapti N (2020) Supplemental Oxygen and Sleep Related Hypoxemia during Night, J Sleep Disor: Treat Care 10:3. (265)

*Corresponding author Navyasree Nuthalapti, Department of pharmacy, Qis college of Pharmacy, Prakasam, AP, India. E-mail: navyanuthalaptisree@gmail.com

Received: March 5, 2021 Accepted: March 19, 2021 Published: March 29, 2021

Daytime hypoxemia has been reported to develop in patients with obstructive sleep Apnea (OSA) derangements of pulmonary mechanics awake PaO₂ were of major importance in establishing the severity of nocturnal hypoxemia lung hyperinflation had major roles in determining the lower values of PaO₂. Moreover, the PaO₂ level at rest is highly dependent on age, and none of the studies previously cited corrected the level of PaO₂ for age.

Symptoms of hypoxemia

- Headache & Shortness of breath
- Fast heartbeat, Coughing & Wheezing
- Confusion and Bluish color in skin, fingernails, and lips

Treatment for hypoxemia

Aims to raise the levels of oxygen in the blood can use medications to treat underlying conditions that cause hypoxemia. Medications are given through an inhaler that enables you to breathe the medicine into your lungs. In severe cases, doctor may use oxygen therapy. Usage of extra oxygen through a device called a cannula (tube) that is clipped to the outside of the nose or to a breathing mask. We can receive oxygen at home, with a portable machine while you travel, or in the hospital

Conclusion

The identification and treatment of SDB in hypoxemic patients improves daytime hypoxemia. It is important to identify SDB in these patients, since supplemental oxygen can frequently be discontinued following treatment with PAP therapy, and helpful for better treatment of conditions of hypoxemia.

Author Affiliations

Department of Pharmacy, QIS College, Guntur, Andhra Pradesh, India

[Top](#)