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Chronic Obstructive Pulmonary Disease and Sleep Disorder Breathing: Prime Time for a Change



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- Sleep complaints are commonly associated with COPD. Sleeping difficulties were the 3rd most frequent complaint in a survey of COPD patients. Sleep quality is low among COPD. However, sleep disorders are not usually assessed during a COPD evaluation.
- Patients with COPD and concomitant obstructive sleep apnea (OSA) have a high risk of death as well as increased risk of exacerbations if OSA remains untreated. Also, people with COPD-OSA have more profound hypoxemia than patients having either condition alone and may be predisposed to pulmonary hypertension.
- OSA is highly prevalent in patients with moderate to severe COPD referred to pulmonary rehabilitation, which could be an important contributory factor to morbidity and mortality.
- Pulmonary rehabilitation improves sleep quality in moderate to severe COPD. Programs should consider including a sleep assessment in patients with COPD and interventions when indicated helping reduce the detrimental impact of OSA in COPD.

Sleep complaints are common in COPD, when sleep is assessed either subjectively or objectively.¹ Sleeping difficulties was the 3rd most frequent complaint (behind dyspnea and fatigue) in a study by Kinsman three decades ago.² Our group has found that subjective sleep quality is poor among more advanced COPD.³ We recently investigated a group of moderate to severe COPD and 66% of them were found to also have OSA.⁴ Unfortunately, sleep is usually not assessed during a COPD evaluation.

Nocturnal Oxygen Desaturation: Up to 27% of patients with COPD without hypoxia during wakefulness can experience important desaturation during sleep.⁵ People with COPD-OSA have more profound hypoxemia than patients having either condition alone and may be predisposed to pulmonary hypertension.⁶

COPD-OSA (Overlap syndrome): Little is known about the pathophysiological and clinical consequences of having concomitant COPD and OSA. Recent studies demonstrate that patients with COPD-OSA have a high risk of death as well as hospitalizations from acute exacerbations if OSA remains untreated.⁷⁻⁹ In patients with OSA, the presence of COPD increases the risk of death 7 fold.¹⁰

Identification and effective treatment of COPD co-morbidities is becoming the cornerstone of COPD management. Despite emergent clinical evidence, sleep disordered breathing such as obstructive sleep apnea (OSA) has not been identified in current guidelines yet as a true potential contributor in poor outcomes.

Pulmonary rehabilitation: These multidisciplinary programs improve dyspnea, exercise capacity and quality of life. Furthermore, we found that pulmonary rehabilitation was associated with improvement in sleep quality³ and insomnia (data not published). Because of the background of the staff involved, including the comprehensive approach to patient assessment, and access to substantial number of COPD subjects, pulmonary rehabilitation provides an optimal opportunity to investigate sleep among COPD patients,

Summary

Sleep disorders (objective and subjective) are very common finding in COPD and should be considered in any comprehensive evaluation of COPD. Pulmonary rehabilitation provides a unique opportunity to assess such detrimental co-morbidities and provide the appropriate tools to help identify, diagnose and provide treatment for such common but undiagnosed conditions.

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