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Editorial

Obstructive Sleep Apnea and Chronic Pulmonary Diseases: Hidden Associate?

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Introduction

Obstructive sleep apnoea (OSA) is an underrecognized and underdiagnosed clinical entity, with a myriad of negative consequences on patient's health and society as a whole. Recent literature has highlighted that obstructive sleep apnoea is firmly associated with the progression of the disease and unsatisfactory clinical outcomes in patients in patients with chronic lung diseases such as chronic obstructive airway disease and idiopathic pulmonary fibrosis.[1] Intermittent hypoxia, a hallmark of obstructive sleep apnoea, has now been identified as a promising target to prevent disease progression in chronic lung diseases based on epidemiological and experimental evidences.[2]

Intermittent hypoxia of obstructive sleep apnoea may possibly overlap with chronic hypoxia associated with chronic obstructive pulmonary disease and idiopathic pulmonary fibrosis to result in higher oxidative stress, systemic inflammation, accelerated structural lung injury and endothelial remodelling.[3] Overlapping comorbidities particularly the cardiovascular are prevalent in both the OSA and COPD, but whether this association is amplified in patients with overlap syndrome remains unclear and poses itself a grey area for research looking at the highly prevalent scenario of both the entities in the general population.

A bidirectional relationship has also been recognized between obstructive sleep apnoea and bronchial asthma where each disorder adversely influences the other ones. Poor asthma control has been linked with obstructive sleep apnoea in ample studies. Interestingly, asthma has now been observed to be linked with a heightened risk of new-onset obstructive sleep apnoea.[4]

In light of evidence emerging in the literature, it is of utmost importance for clinicians and researchers to identify and further explore the hidden yet complex dual association between obstructive sleep apnoea and chronic pulmonary diseases. Since bronchial asthma, chronic obstructive airway disease, and interstitial lung diseases, i.e., idiopathic pulmonary fibrosis are highly prevalent among respiratory diseases, a multidimensional assessment addressing chronic lung diseases mentioned supra, other comorbidities such as obstructive sleep apnoea etc and their risk factor with individualized management plans will need to be the basis of further future therapeutic interventions.

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