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Letter to the Editor

COVID 19 and OSA: exploring multiple cross-ways



The Corona Virus Disease-2019(COVID-19) pandemic has brought the world to a stand still with ever increasing morbidity and mortality. This scenario makes it imperative to look into the possible risk factors.

Although majority of patients remain asymptomatic, a significant proportion of symptomatic patients require intensive care. Some of the major factors associated with increased mortality are: obesity, older age, male gender, diabetes mellitus, hypertension, coronary artery disease, malignancy and chronic kidney disease [1].

The pathogenesis of Obstructive Sleep Apnea (OSA) shares certain striking similarities with COVID19 Acute respiratory distress syndrome (ARDS), viz.,

- OSA and COVID19 are both pro-inflammatory states.
- It has been strongly argued that the culprit severe acute respiratory syndrome coronavirus- 2 enters cells through Angiotensin Converting Enzyme-2 receptors. Obesity is associated with an increased expression of these receptors in adipose tissue. It follows that infectivity would be more pronounced in obese OSA patients [2].
- Cardiac complications in COVID-19 include myocarditis, acute myocardial infarction, heart failure and arrhythmias [3]. OSA is a known risk factor for hypertension, arrhythmias, heart failure and acute cardiac syndromes and thus may increase cardiac morbidity and mortality in these patients [4].
- Hypoxemia and altered hemodynamics in OSA can precipitate a pro-coagulant state, which could further accentuate COVID19 related coagulopathy.

Due to the similar pathophysiology of OSA and COVID-19 ARDS and their interlinking natural histories, we, the authors feel that an analysis of OSA, as a putative mitigating factor in COVID 19 ARDS should be looked upon.

In a recently published study, 1/3rd of patients requiring ICU admission for COVID19 ARDS had preexistent OSA [5]. Further prospective studies are required to establish whether patients with pre-existing OSA are indeed at a higher risk to develop COVID 19 related complications. This will certainly help in early identification of patients who are likely to develop complications and may even result in prevention of complications.

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None.

Conflict of interest

None.

The ICMJE Uniform Disclosure Form for Potential Conflicts of Interest associated with this article can be viewed by clicking on the following link: <https://doi.org/10.1016/j.sleep.2020.11.013>.

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Khushboo Saxena, Avishek Kar
 Department of Pulmonary and Sleep Medicine, All India Institute of
 Medical Sciences, Bhopal, India
 E-mail addresses: drkhushboosaxena@yahoo.com (K. Saxena),
avishek.kar06@gmail.com (A. Kar).

Abhishek Goyal*
 Department of Pulmonary Medicine, All India Institute of Medical
 Sciences, Bhopal, India

* Corresponding author.
 E-mail address: abhishek.pulmed@aiimsbhopal.edu.in (A. Goyal).

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