
Profile of sleep-disordered breathing in ILD: Could be better with study design?

Sir,

I read the manuscript with great interest and congratulate the authors for well-written manuscript.^[1] Manuscript was mentioned as prospective observational study but, in this, design of study needs to follow the same group of cohorts for some period to know the association between some factors with outcome variable. This study seems to be simple observational cross-sectional study.^[2] Inclusion criteria and exclusion was not defined. What could be the region for inclusion of defined period and total study subject of 100. Was it total 100 consecutive patients diagnosed as Interstitial lung disease (ILD) in given period? Or there were any

exclusion criteria like patient who already diagnosed as ILD on treatment or patient require oxygen or who denied for sleep study etc.

Nocturnal Oxygen desaturation (NOD) was not defined. Nocturnal desaturation occurs frequently in ILDs especially in idiopathic pulmonary fibrosis.^[3,4] Significant nocturnal desaturation considered when >10% of sleep with oxygen saturation (SpO₂) <90%. Desaturation index was defined as the number of desaturation events >4%/h. Although 10% or more of total sleep time with SpO₂ <90% has been defined as “significant” nocturnal hypoxemia and it has prognostic value in ILD, specific thresholds have not been established.^[5] If this threshold used to

define NOD, it should be clearly mentioned in materials and methods.

Author mentioned that the mean forced vital capacity (FVC) in the study group was 53.67% predicted, 50% predicted in patients with obstructive sleep apnea (OSA), 45.56% predicted in patient having NOD without OSA, and 57.87% predicted in patients with no sleep-disordered breathing (SDB). The difference was said statistically significant with $P = 0.48$ (<0.5). No comment on statistical method performed for correlation and how can $P = 0.48$ become significant. Mean FVC was found lowest in group NOD without OSA (45.56%), Is it means that restriction is more due to Nocturnal desaturation than OSA? It is very important to know the range of data but did not find standard deviation or quartile deviation for continuous variable or categorical variable. P value was wrongly interoperated not only for FVC but also for mean 6-min walking distance, PaO_2 , and pulmonary arterial systolic pressure.

ILD is not only associated with OSA as comorbidities but other such as diabetes, hypertension, obesity, and chronic obstructive pulmonary disease. No comment on that as it could influence the all outcome variable measured.

The study was performed to assess prevalence and profile of SDB and OSA. Sleep disorder of breathing include 4 disease central sleep apnea syndromes, OSA disorders, sleep-related hypoventilation disorders, sleep-related hypoxemia disorder but no comment found on hypoventilation and central sleep apnea in whole manuscript.

In last, the study was concluded as SDB in ILD is associated with a significant impact on the cardinal determinants of functional capacity, lung function, and quality of life. However, primary objective of study was prevalence of SDB in ILD and also quality of life was not assessed.

Thanking you and authors!

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

Deependra Kumar Rai

Department of Pulmonary Medicine, AIIMS, Patna, Bihar, India
E-mail: deependra78@gmail.com

Submitted: 20-Oct-2020

Accepted: 26-Nov-2020

Published: 02-Mar-2021

REFERENCES

1. Utpat K, Gupta A, Desai U, Joshi JM, Bharmal RN. Prevalence and profile of sleep-disordered breathing and obstructive sleep apnea in patients with interstitial lung disease at the pulmonary medicine department of a tertiary care hospital in Mumbai. *Lung India* 2020;37:415-20.
2. Song JW, Chung KC. Observational studies: Cohort and case-control studies. *Plast Reconstr Surg* 2010;126:2234-42.
3. Lancaster LH, Mason WR, Parnell JA, Rice TW, Loyd JE, Milstone AP, et al. Obstructive sleep apnea is common in idiopathic pulmonary fibrosis. *Chest* 2009;136:772-8.
4. Kolilekas L, Manali E, Vlami KA, Lyberopoulos P, Triantafyllidou C, Kagouridis K, et al. Sleep oxygen desaturation predicts survival in idiopathic pulmonary fibrosis. *J Clin Sleep Med* 2013;9:593-601.
5. Corte TJ, Wort SJ, Talbot S, Macdonald PM, Hansel DM, Polkey M, et al. Elevated nocturnal desaturation index predicts mortality in interstitial lung disease. *Sarcoidosis Vasc Diffuse Lung Dis* 2012;29:41-50.

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

Access this article online	
Quick Response Code: 	Website: www.lungindia.com
	DOI: 10.4103/lungindia.lungindia_838_20

How to cite this article: Rai DK. Profile of sleep-disordered breathing in ILD: Could be better with study design?. *Lung India* 2021;38:204-5.

© 2021 Indian Chest Society | Published by Wolters Kluwer - Medknow