

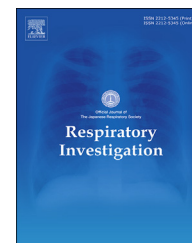


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Letter to the Editor

Respiratory rate index utility in high-flow nasal cannula oxygen therapy in COVID-19 pneumonia; what are the perfect boundaries?

To the Editor:

We have read with interest the article by Takeshita et al. [1] on the use of the respiratory rate index as a predictor of high-flow nasal cannula (HFNC) treatment efficacy in patients with coronavirus disease 2019 (COVID-19). This study confirms the complexity of the prediction of HFNC failure [2]. However, there are some issues, in our opinion, that need to be clarified.

First, the authors described “that respiratory rate (RR) after HFNC treatment was significantly higher in the HFNC failure group than in the HFNC success group, whereas the RR before HFNC treatment did not significantly differ between the two groups.” In addition, this difference became statistically significant with treatment; thus, we wonder if this data may have depended on the size of the population.

Second, other factors influencing the RR, and therefore its predictive value and specificity, are not considered in the analysis and discussion: i.e., any pre-existing thoraco-pulmonary alterations affecting respiratory mechanics, associated comorbidities, and the severity of the disease. Therefore, no information regarding the method used to diagnose the presence and degree of respiratory failure and exchange of gas, nor information on the pattern and extent of lung damage due to COVID-19 pneumonia was provided (radiological score - Brixia score) [3].

The degree of patients’ alertness or presence of psychomotor agitation before starting therapy with HFNC was not clarified, and whether any sort of procedural sedation was used to favor adaptation to HFNC treatment and their influence on the results.

We believe that the integration of RR with these data provides information with greater predictive power in this setting of patients, who have respiratory insufficiency with a high risk of intubation. Therefore, it is more difficult to use only the respiratory rate as a specific and sensitive predictor of HFNC failure.

Conflict of Interest

The authors have no conflict of interest to declare.

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Mariano Mazza*

Domenica Di Costanzo

U.O.C. Pneumologia Semi-Intensiva COVID, A.O. “Sant’ Anna e San Sebastiano”, di Rilievo Nazionale e Alta Specializzazione, Via Ferdinando Palasciano, 81100, Caserta, Italy

Antonio M. Esquinas

Intensive Care Unit, Hospital Morales Meseguer. Murcia, Spain
E-mail address: antmesquinas@gmail.com

*Corresponding author.

E-mail addresses: dottmmazza@gmail.com (M. Mazza),
domenica.dicostanzo@libero.it (D. Di Costanzo)

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