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Response

Author's response to "Continuous positive airway pressure helmet in patients with ARDS due to COVID-19 pneumonia: Insights about a therapy monitoring protocol"



Dear Sir,

Thank you for your interest in our study,¹ and we are grateful for the opportunity to reply to your comments.

We are used to personalising the therapy² by monitoring the respiratory rate (RR) and oxygen saturation and their response to helmet continuous positive airway pressure (H-CPAP) in patients with respiratory failure due to interstitial pneumonia due to COVID-19 because these are the two best independent parameters in noninvasive modality.³ Furthermore, many patients with COVID-19 do not complain of dyspnoea in spite of a marked increase in the RR.⁴ We agree with your reflection: fever and discomfort can change the RR. For this reason, during nursing monitoring, body temperature, SpO₂, RR, PEEP, and FiO₂ were recorded before the H-CPAP trial was started every 30 min until the end of the trial.

We did not analyse the patients' compliance and comfort. These were not endpoints for us. The aim of our case series study was to describe the clinical characteristics of patients presenting to the emergency department with acute respiratory failure due to COVID-19-related pneumonia undergoing treatment with H-CPAP with a strict nursing evaluation and monitoring.

However, during the first 2 h of the H-CPAP trial, we administered morphine in patients who referred to anxiety and discomfort.

We did not analyse the causes of helmet failure as an interface. However, in studies comparing the effectiveness of facemasks, skin lesions are the main complications of noninvasive ventilation delivered,⁵ whereas with helmet, this problem could be avoided since there is no direct contact between the helmet and the patient's face. On the other hand, noise needs to be reduced to increase patients' comfort and tolerance to the respiratory support.⁶ We suggest that the percent of interface failure in our study is comparable to the one in the previous studies.⁷

As regard your last question, according to the literature,⁸ all our patients were prophylaxed with low-molecular-weight heparin.

CRediT authorship contribution statement

Daniele Privitera, Nicolò Capsoni, Andrea Bellone: Conceptualisation, Visualisation, Supervision, Writing-Reviewing and Editing.

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Daniele Privitera, MSN, CCRN*, Nicolò Capsoni, MD,
Andrea Bellone, MD

Department of Emergency Medicine, ASST Grande Ospedale
Metropolitano Niguarda, Milan, Italy

* Corresponding author. Tel +390264442294.

E-mail address: daniele.privitera@ospedaleniguarda.it (D. Privitera).

16 March 2022