



## CORRESPONDENCE

### New perspectives for the use of high-flow nasal oxygen



To the Editor,

High-flow nasal cannula (HFNC) oxygen therapy is an innovative modality for early treatment of adults with respiratory failure and has physiological advantages compared to other standard oxygen therapies.

We read carefully the article by Demelo-Rodriguez et al.<sup>1</sup> and congratulate the authors on their study. There are, however, some points to be taken into consideration.

This study includes patients with different types of acute respiratory failure (ARF) which makes it difficult to establish which patients benefit most from HFNC. It would, therefore, be useful to have larger and more randomized controlled trials, with specific disorders such as chronic obstructive pulmonary disease (COPD) or idiopathic pulmonary fibrosis (IPF), to substantiate indications and criteria for the management of HFNC.<sup>2-4</sup>

In IPF, the most common interstitial lung disease and with high mortality, in which prognosis is extremely poor after mechanical ventilation, HFNC appears to be an alternative modality for treating patients with hypoxemia who do not require immediate intubation, providing better oxygenation, dyspnea relief and comfort.<sup>3,5</sup>

The use of HFNC has also been described in stable hypercapnic COPD patients with interesting results, such as increased tidal volume and reduction of respiratory rate, minute volumes and capillary  $p\text{CO}_2$ , enabling it to be an alternative to noninvasive ventilation.<sup>5</sup> The dead space wash-out of the upper respiratory airway and the positive end expiratory pressure effect may contribute to these important effects of HFNC.<sup>5</sup>

HFNC is easy-to-use and is well tolerated, as described in this study, which was carried out in an Intermediate Care Unit. In the future it may be used more frequently

in hospital wards and help decrease admissions to intensive care units.<sup>2,3</sup>

In short, HFNC is a useful and exciting modality for the treatment of patients with respiratory failure and its use is growing worldwide.<sup>4</sup>

### Conflict of interest

The author has no conflicts of interest to declare.

### References

1. Demelo-Rodriguez P, Tocora D, Cervera J. High-flow oxygen therapy through nasal cannula: prospective observational study in an intermediate care unit. *Rev Port Pneumol.* 2016;22:292-3.
2. Roca O, Hernández G, Díaz-Lobato S, et al. Current evidence for the effectiveness of heated and humidified high flow nasal cannula supportive therapy in adult patients with respiratory failure. *Crit Care.* 2016;20:109.
3. Peters S, Holets S, Gay P. High-flow nasal cannula therapy in do-not-intubate patients with hypoxemic respiratory distress. *Respir Care.* 2013;58:597-600.
4. Nishimura M. High-flow nasal cannula oxygen therapy in adults: physiological benefits, indication, clinical benefits, and adverse effects. *Respir Care.* 2016;61(4):529-41.
5. Bräunlich J, Beyer D, Mai D, et al. Effects of nasal high flow on ventilation in volunteers, COPD and idiopathic pulmonary fibrosis patients. *Respiration.* 2013;85:319-25.

P.S. Santos<sup>a,\*</sup>, J. Cravo<sup>a</sup>, A.M. Esquinas<sup>b</sup>

<sup>a</sup> *Pulmonology Unit, Centro Hospitalar e Universitário de Coimbra – Hospitais da Universidade de Coimbra, Coimbra, Portugal*

<sup>b</sup> *Intensive Care Unit, Hospital Morales Meseguer, Murcia, Spain*

\* Corresponding author.

E-mail address: [pedrorssantos@gmail.com](mailto:pedrorssantos@gmail.com) (P.S. Santos).

Available online 12 August 2016