

REFERENCES

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From the authors:

We would like to thank A. Cuvelier and J-F. Muir for their interesting comment on our article [1]. They have highlighted the importance of technical factors to determine the rate of success of noninvasive ventilation (NIV) in patients with exacerbation of chronic obstructive pulmonary disorder (COPD).

From a theoretical point of view, we agree that problems related to humidification, interfaces, ventilator modes and patient–ventilator interaction may be crucial to ensure the best results of NIV in single patients, but we believe that experience, skills and the level of assistance of the personnel may be even more important than any particular technical aspect itself in determining the success of NIV in patients with similar clinical characteristics [2]. The Italian units participating in our study are all recognised as trained and experienced in the field of NIV for a long period of time (some units for >6 yrs). We designed a “real world” study that allowed all the personnel to manage the patients according to their experience, thus using the best-fitting mask for each patient, changing

interface when needed, adjusting ventilator settings appropriately, and tailoring any technical aspects of NIV to the patients’ needs and clinical evolution. It is well known that inexperienced management of equipment or ventilation mode may be responsible for the failure of NIV and that there is a learning curve in this ventilatory technique, as with other medical or surgical techniques. Nevertheless, the only comparable way to assess progressive training and familiarity with NIV should be by calculating the unit’s years of experience in NIV application. In fact, some investigators who have published several papers on NIV reported initial negative results in COPD patients [3], but the same group later revealed opposite results [4, 5]. CARLUCCI *et al.* [6] recently reported that, over 8 yrs, their increased experience with NIV progressively allowed more severely ill COPD patients to be treated without changing the rate of success.

The letter to the Editors from A. Cuvelier and J-F. Muir correctly recognises the difficulty of designing clinical studies that are able to control all technical factors. Moreover, the familiarity and ability of the medical and paramedical staff with noninvasive ventilation cannot be measured, but only presumed by comparing the success rate within the same unit over time. Bearing all this in mind, we are confident that our validated chart of risk for noninvasive ventilation failure may be used by all the trained units having more than 3 yrs’ experience with noninvasive ventilation application in patients with acute exacerbation of chronic obstructive pulmonary disease.

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