Noninvasive Ventilation and Medical Emergency Team in Ward Departments: Will It Be a Safe and Practical Battlefield?

To the Editor:

Noninvasive mechanical ventilation (NIV) requires a properly trained healthcare organization, a factor that influences short-term outcomes, especially for patients who are more severely ill or have comorbidities.[1] Epidemiological data show that the location where NIV is performed is heterogenous and complicated by local hospital practices.[2] However, application of NIV outside ICU settings is still infrequent.[3]

We read with great interest the study by Khalid et al,[4] describing outcomes during NIV by medical emergency team (MET). This article opens a greatly controversial topic with important clinical implications. However, we think that some aspects need clarification for proper practical extrapolation.

First of all, patients in the NIV group presented with quite mild symptoms, as derived by vital signs (no data are given about P_{aO_2}/F_{IO_2}), and there should be no surprise that they fared well on NIV. Furthermore, these were mainly patients with a COPD exacerbation and acute cardiogenic pulmonary edema, conditions known to respond well to this technique. Some concern should be expressed about acute asthma patients placed on NIV in a ward environment. We would have appreciated a separate evaluation of the efficacy of the technique on this particular type of patient. In any event, the study shows that well-selected mild patients are good candidates for NIV outside the ICU, intermediate care unit, or general care units when NIV is initially assisted by an MET. However, the mean time spent by the MET with patients in the NIV group was only 118 (SD = 34) min, before their care was transferred back to the ward staff. Given that no data are shown for staff regarding their competence in NIV, we wonder what the clinical, safety, and cost-effectiveness results of this study would have been, if, instead of employing an MET protocol, physicians and nurses of the general wards were directly and thoroughly trained in the basics of NIV. This consideration is reinforced by the fact that the MET physician in this study was not an intensivist and that simple bi-level positive airway pressure auto-tracked ventilators (generally simple to set) were used.

Second, in this study, 83 patients were directly transferred to the ICU, and 51% of them were ultimately intubated. We would have liked to have information on how many of them received a trial of NIV once in the ICU, along with indications and outcomes. This would have added to our knowledge of the proper setting for NIV depending on the severity of the underlying disease.

Finally, although patients in the non-NIV group had milder symptoms than those in the NIV group, a significantly larger number of them reached the primary end point. It is noteworthy that pneumonia/aspiration patients were significantly more frequent in this group. Although the use of NIV in pneumonia is still controversial, it would have been of great interest to examine the effect of a cautious NIV trial in these more mildly symptomatic patients, considering that it would have been a very early intervention, and possibly effective, in the evolution of the disease. Further prospective clinical trials are needed to consolidate the influence and impact of an MET in ward departments and outcome trends.

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