

Noninvasive ventilation duration as an outcome predictor in acute exacerbation of COPD and respiratory failure: The saga continues

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Dear Editor,

We applaud the study by Ghazala et al. [1], where the authors analyzed predictors of clinical outcomes in acute exacerbation of chronic obstructive pulmonary disease (COPD) requiring noninvasive ventilation (NIV). Although the study is retrospective in nature, the use of multivariate regression analysis is pragmatic. Understanding predictive models is a hot topic; the study finding was thought provoking and, and we consider some key aspects for discussion.

The APACHE-III (Acute Physiology and Chronic Health Evaluation) is an acceptable and predictable factor; however, body mass index (BMI) as an independent predictor needs more study [2]. NIV settings and titration of positive airway pressures used in an obese patient are crucial, as these patients often require higher pressures to overcome the obstruction [3]. The data on sleep-disordered breathing; worsening clinical condition; reasons for delaying or prolong NIV, PaO₂ (partial pressure of oxygen in arterial blood), and/or SpO₂ (peripheral oxygen saturation); and pH levels would be informative [4].

Furthermore, adherence to predefined NIV failure criteria or criteria to start invasive mechanical ventilation (IMV) following NIV failure is crucial as it can deter possible practice variations, impacting the decision of IMV and thereby the outcome. Accordingly, the authors' finding that NIV duration did not predict the clinical outcome, even in failed patients, might be erroneous. Additionally, a dedicated team caring for NIV patients impacts the clinical outcomes [5].

Therefore, in our assessment, discarding the impact of NIV duration and accepting the BMI as a predictor of worse clinical outcomes appears

premature on the background of current evidence. We would welcome the authors' opinions on these points.

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