A letter in response to "noninvasive ventilation: Are we overdoing it?"

Sir,

I read with interest the article by Purwar *et al*.[1] where the authors have meticulously described their experience with noninvasive ventilation (NIV) and would like to make the following observations:

I In this study, no strict criteria was set for initiation of NIV as has been stated by the authors and the patients had been initiated on NIV as per the treating physician's discretion. The definition

of acute respiratory failure used by the authors includes subjective terms such as "moderate to severe dyspnea" and "moderate to severe acidosis" and it has not been clarified whether rigid criteria (e.g. Arterial blood gas) as used by other studies[2,3] has been adhered to. Due to this it may be difficult to generalize the results of this study as the practice might vary from one physician/institute to the other

II Some indications of NIV use as mentioned by the authors need further explanation. Around 13 cases of nonpulmonary sepsis received NIV (they were not in the acute lung injury/acute respiratory distress syndrome [ARDS] group), but the pathophysiology addressed by NIV was not clear. Similarly, two patients with gastro-intestinal bleed received NIV (who probably did not have severe gastro-intestinal symptoms or aspiration as it was a contraindication in the present study), but still had "acute respiratory failure" necessitating NIV administration. A patient with pleural effusion also received NIV, but the reason for the same has not been elucidated. It might seem that in the absence of strict guidelines to initiate NIV there may have left scope for the "overdoing" – a question which the authors themselves ask in the title

III The authors hypothesize that the reason for higher rate of NIV failure in group 2 could be due to longer period of observation in these cases, as per the data provided by Purwar *et al*., the differences between the number of patients who were intubated within 2 h or after 2 h were not significant in this study. It can be difficult to pinpoint the reason for more deaths in group 2, but it seems that use of NIV is addresses the pathophysiology more effectively for group 1 than for group 2 indications that is, say it works better for acute exacerbation of chronic obstructive pulmonary disease than in cases of ARDS. While reverses the hypoventilation in the former while it is not as effective as invasive ventilation for recruiting the lung units in the latter. Anyway as per evidence it seems more logical to have a lower threshold for conversion to invasive ventilation in cases of nonlevel 1 indications as in these cases the evidence is less robust and the chance of failure are higher.

Animesh Ray
Department of Pulmonary Critical Care and Sleep Medicine, VMMC and Safdarjang Hospital, New Delhi, India

Correspondence:
Dr. Animesh Ray,Department of Pulmonary Critical Care and Sleep Medicine, VMMC and Safdarjang Hospital, New Delhi, India
E-mail: doctoranimeshray@gmail.com

References

1. Purwar S, Venkataraman R, Senthilkumar R, Ramakrishnan N, Abraham BK. Noninvasive ventilation: Are we overdoing it? Indian J Crit Care Med 2014;18:503-7.
2. Agarwal R, Handa A, Aggarwal AN, Gupta D, Behera D. Outcomes of noninvasive ventilation in acute hypoxemic respiratory failure in a respiratory intensive care unit in north India. Respir Care 2009;54:1679-87.
3. Carrillo A, Gonzalez-Diaz G, Ferrer M, Martinez-Quintana ME, Lopez-Martinez A, Llamas N, *et al.* Non-invasive ventilation in community-acquired pneumonia and severe acute respiratory failure. Intensive Care Med 2012;38:458-66.

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