

Neutrophil/Lymphocyte Ratio as a Predictive Biomarker of NIV Failure in AECOPD: The Unveiled Facts [Letter]

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Dear editor

We appreciate the work of Sun et al,¹ who observed that Neutrophil Lymphocyte Ratio (NLR) can be an effective marker for predicting Non Invasive Ventilation (NIV) failure in Acute Exacerbation of Chronic Obstructive Pulmonary Disease (AECOPD). They also observed that NLR >8.9 had higher risk of NIV failure requiring intubation. However, we raise some points for further clarification.

NLR gets elevated in AECOPD compared with stable state. Serial monitoring of NLR can predict NIV failure better than single measurement.² NLR is an independent risk factor for 28-day mortality in patients with AECOPD,² and the mortality rate increases with NLR ≥ 4 .³ We are curious to know whether continual monitoring of NLR was done and compared with that of stable state in the same patient. In addition, it would be interesting to know whether they assessed mortality outcome, given that the length of hospital stay was observed already.

NLR encompasses both neutrophilia and lymphopenia, the indicators of inflammation and decreased immune response, respectively. Thus, it can reflect the severity of COPD better than when neutrophilia or lymphopenia are monitored alone. Another novel inflammatory marker, PLR (serum absolute count ratio of platelet to lymphocyte) can help predict the severity of clinical condition and mortality in AECOPD patients.³

The authors observed respiratory rate and arterial blood gas analysis. We are curious to know whether they used simple bedside parameters or scores predictive of NIV failure such as initial high respiratory rate, low PaO₂/FiO₂ ratio, HACOR score >5 at the end of 1 hour of NIV, and initial hs-CRP.⁴

Individuals with comorbidities and decreased functional capabilities are at higher risk for NIV failure. Patients with poor baseline performance status and having higher DECAF (dyspnea, eosinopenia, consolidation, acidemia, atrial fibrillation) score on admission can predict severity of acute clinical deterioration.⁵ We wonder whether they had a scope to observe those in their study.

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Disclosure

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