

Correspondence

Lung Hyperinflation despite Lung-protective Ventilation

To the Editor:

We read with great interest the article by Terragni and colleagues (1) discussing lung hyperinflation associated with a high concentration of inflammatory mediators in bronchoalveolar lavage fluid. The authors point out the delicate balance between preventing end-expiratory derecruitment and inducing hyperinflation of the normally aerated lung areas when applying lung-protective ventilation in acute respiratory distress syndrome (ARDS). Based on this and previous studies (2), it is intriguing to speculate that the association between plateau pressures and the risk of ventilator-associated lung injury (VALI) could be a continuous one without any identifiable cut-off points that would define "injurious" and "protective" ventilation. If this hypothesis was valid, then prevention of VALI should include alternative and/or adjunctive modes of lung protection.

We believe that prone positioning represents such an effective option, especially for patients with ARDS and focal loss of aeration (lobar ARDS). Our recently published study (3) has focused on the effects of prone positioning when applied after a recruitment maneuver in patients with acute lung injury (ALI). Prone positioning recruited the dependent lung areas and reduced overinflation of ventral areas without any indication of end-expiratory derecruitment. This decreased "dispersion" of aeration, which is possibly protective against VALI, was more evident in patients with focal loss of aeration (lobar ALI/ARDS). The less protected subpopulation in the study by Terragni and coworkers (1) could also be classified as lobar ARDS.

Conflict of Interest Statement: None of the authors has a financial relationship with a commercial entity that has an interest in the subject of this manuscript.

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From the Authors:

We thank Dr. Galiatsou and colleagues for their comments on our publication (1). The efficacy of prone positioning in patients with acute respiratory distress syndrome (ARDS) has been tested in several recent clinical trials (2–4). These studies, although suggestive of a potential role of prone positioning to

minimize ventilator-induced lung injury (5), did not reach a clear, statistically significant conclusion (6). Ongoing studies will hopefully clarify these issues.

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Optimizing Medications for Poorly Controlled Asthma

To the Editor:

The goals of asthma therapy are to maintain long-term control of asthma symptoms, prevent exacerbations, attain the best possible lung function for daily activities, and minimize side effects. Inflammation is a critical feature in the pathogenesis of asthma and, consequently, inhaled corticosteroids (ICS) are the mainstay of treatment. There have been several randomized studies demonstrating that ICS reduce asthma symptoms, improve lung function, reduce the frequency of acute exacerbations, and improve airway hyperresponsiveness (1, 2).