A New Score Based on Procalcitonin and Chest Echography for Diagnosis of Ventilator-Associated Pneumonia

When? How? For Whom?

To the Editor:

We read with great interest the study published by Zagli et al in a recent issue of CHEST (December 2014). In spite of originality and new insights concerning diagnosis of ventilator-associated pneumonia (VAP), some issues must be considered. First, seven Candida albicans microbiologically confirmed VAP cases is quite an unusual incidence for this pathogen. Diagnosis of Candida pneumonia should be abandoned in ICU setting when immunocompetent subjects are considered. Moreover, fungal airway colonization is a frequent finding in patients submitted to mechanical ventilation, and a Candida VAP diagnosis can only be firmly established based on histologic proof. Currently, some discrepancies are found in VAP diagnosis made by lung ultrasonography. Although wide exclusion criteria permitted a refinement of study population (lowering external applicability), the inclusion of trauma patients can be concealing consolidations not related to pneumonia, especially in patients with pulmonary contusion. Although based on consensus recommendations, the sonographic pneumonia diagnostic criteria are still controversial. As a matter of fact, it is level C quality of evidence (ie, “any estimate of effect or accuracy is very uncertain”). An interstitial pattern (B lines) does not exclude an infectious cause for lung damage—a corollary of radiographic infiltrates presented in the formal VAP diagnosis—and it was not clarified in the present study. Thus, a model of lung ultrasonography diagnosis based in a comprehensive score, as previously described, should be a more promising tool.

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Response

To the Editor:

I thank Dr Nedel and colleagues for their interest and criticisms on our recent article in CHEST. In our retrospective study, we decided to consider only patients with microbiologically confirmed infection to limit the bias of the study design. This decision might represent a limit itself, as correctly suggested by Dr Nedel and colleagues, but, in our opinion, the low number of patients with Candida in tracheal aspirate cultures should not influence the potential value of the complete score proposed.

As appropriately underlined by Dr Nedel and colleagues, chest echography is still debated and studied in literature. We also previously reported experience in which patients preferring chest ultrasonography to traditional diagnostic imaging were followed. In our article, we tried to verify whether a diagnosis of ventilator-associated pneumonia (VAP) could have been made not only with chest echography, but also using chest echography in a more complex score system. In fact, as we reported in Table 5 in our article, sensitivity of chest echography alone in VAP diagnosis had a quite low sensitivity (59.3%) if compared with the complete score (80.5%). These data not only confirm the correct observation made by

References

Dr Nedel and colleagues, but also confirm that a score, composed of different tools, should be preferred instead of a single finding in VAP diagnosis.

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