Utility of Lung Sonography in Acute Respiratory Failure

To the Editor:

I read with interest the article written by Drs. Lichtenstein and Mezière in a recent issue of CHEST (July 2008) on the use of ultrasound to make a rapid diagnosis in patients with acute respiratory failure with the BLUE protocol. In the “Materials and Methods” section of the article, it is says that the ultrasound examination took no longer than 3 min. If the test was limited to just the evaluation of the lungs, one can believe that in experienced hands 3 min would be sufficient. But going by the protocol, a patient with an A profile (ie, anterior predominant bilateral A lines with lung sliding) would require venous analysis. In my opinion, it is not possible to do venous analysis for deep vein thrombosis within 3 min, even if one is limiting the study to compression sonography.

In a patient with underlying chronic interstitial syndrome, it would be very difficult to differentiate acute exacerbation of the underlying disease from pulmonary edema; hence, the knowledge of a patient’s medical history is crucial in such a situation. Pneumonia can present with different profiles (A, anterior predominant bilateral A lines with lung sliding; A/B, anterior predominant B+ lines on one side and predominant A lines on the other side; B, anterior alveolar consolidations; and B+, anterior predominant B+ lines with abolished lung sliding), which can make it confusing for clinicians especially while they are learning the use of lung sonography.

I find lung sonography to be very useful in patients with conditions such as pulmonary edema and pleural effusions, and in ruling out pneumothorax. For other clinical presentations such as COPD, pneumonia, asthma, and pulmonary embolism, one may have to acquire extensive experience before becoming comfortable in interpreting the results. The authors excluded 41 patients from analysis (16 patients with an unknown diagnosis, 16 with several final diagnoses, and 9 with a rare diagnosis). In clinical practice, these are the very patients who cause a diagnostic dilemma, in whom, besides a clinical examination and basic laboratory tests, clinicians would want to perform a diagnostic test with high accuracy. The yield of ultrasonography would decline if these patients were considered for statistical analysis.

I read the article with interest. The authors have no conflicts of interest to disclose. Reproduction of this article is prohibited without written permission from the American College of Chest Physicians (www.chestjournal.org/misc/reprints.shtml). Correspondence to: Rahul Khosla, MD, Veterans Affairs Medical Center, Washington, DC 20422; e-mail: rkhosla6@yahoo.com

REFERENCES