Comprehensive Clinical Evidence for Pulmonary Embolism Diagnosis and Workup

Response

To the Editor:

In their recent letter in CHEST (May 2014), Maggi et al raise some concerns regarding our article. The revolution of any “point-of-care” application may still be sometimes difficult to accept, like it was in the “consultative” era of ultrasound for too many years. However, we all should reflect on the fact that the power of some ultrasound signs may vary depending on the specific setting and patient condition that may be encountered, particularly in emergency. We try to reply point by point.

First, dorsal scans were not performed in a minority of cases, and this was clearly reported in the text. Regarding the position of the patient during the ultrasound examination, in our daily emergency practice in academic institutions with annual census up to 120,000 visits, it never happens that the patient cannot lie down on the stretcher to perform all the necessary tests, especially in the most serious emergencies. In our study, supine was intended for a position that may be sometimes “near to supine” when the back of the stretcher is slightly pulled up. However, we do not believe the position of the patient has any interference with the ultrasound examination for peripheral infarctions, while examining or not examining the dorsal areas may make the difference.

Second, Maggi et al reference their concern with two articles. The first is an original study, published in a high-ranking international journal, on a large population that validated the ultrasound signs for infarction both in terms of specificity and morphology and has inspired our protocol. The other paper is a review article based on personal opinions and subjective interpretation of the literature, which cannot be considered a scientific guide.

Third, we confirm that number and location of pulmonary infarcts are correctly reported and concordant between text and Figure 2 in our article. Maggi et al quoted a sentence that the reader cannot find in the article. Rather, we reported that “77 patients showed at least one subpleural infarct.”

Fourth, detection of DVT in patients suspected of pulmonary embolism (PE) warrants anticoagulant treatment without the need for further testing. In 14 patients without DVT, lung and heart ultrasonography were both positive; in 11 of them, the final diagnosis was PE.

Fifth, we concluded our study by suggesting that multiorgan ultrasonography may safely rule out PE in symptomatic patients and reduce the number of negative CT scans in the ED. We did not study asymptomatic patients, and we did not suggest treatment systematically based on a combination of lung and cardiac ultrasonographic signs. However, speculation on this point should consider the basic principle that accuracy of the tests may vary depending on specific settings and patient’s condition.

Giovanni Volpicelli, MD, FCCP
Torino, Italy
Peiman Nazerian, MD
Firenze, Italy

AFFILIATIONS: From the Department of Emergency Medicine (Dr Volpicelli), San Luigi Gonzaga University Hospital; and Department of Emergency Medicine (Dr Nazerian), Careggi University Hospital.

FINANCIAL/NONFINANCIAL DISCLOSURES: The authors have reported to CHEST that no potential conflicts of interest exist with any companies/organizations whose products or services may be discussed in this article.

CORRESPONDENCE TO: Peiman Nazerian, MD, Department of Emergency Medicine, Careggi University Hospital, Largo Brambilla 3, 50134 Firenze, Italy; e-mail: p nazelian@hotmail.com

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DOI: 10.1378/chest.14-2211

References


