

CORRESPONDENCE

In Reply

We thank Drs. Lahham and Wilson for their interest in our systematic review. To clarify, our focus was the diagnosis of acute left-sided heart failure in patients with undifferentiated dyspnea. We agree that right-sided heart failure is an important and distinct syndrome largely defined by peripheral rather than pulmonary congestion and acknowledge that use of lung ultrasound for establishing this diagnosis can be challenging. While an analysis of tests that might assist in diagnosing isolated right-sided heart failure is of value, this is beyond the scope of our review. However, we acknowledge the importance of right ventricular contractility in the setting of acute left-sided heart failure, particularly as it relates to adrenergic stimulation and systemic venoconstriction,¹ and support further research in this area.

Beyond the issue of right-sided heart failure, Drs. Lahham and Wilson also suggest that the performance of lung ultrasound in the diagnosis of acute heart failure may not be as robust in clinical practice as what we have demonstrated in our comprehensive review of existing studies. To support this assertion, they reference a study by Chiem et al.,² where the sensitivity and specificity of lung ultrasound for acute heart failure were lower than those found in most, but not all, of the lung ultrasound studies we included. Unfortunately, this article was not available at the time of our literature review and could not be included in our final publication. However, this article does support equivalent interpretation of lung ultrasound when performed by both novice and expert sonographers,² suggesting that it could easily be incorporated into the emergency department evaluation of patients with suspected acute heart failure.

While there are inherent limitations to each individual diagnostic variable that we investigated in our systematic review, when interpreted within the context of clinical gestalt, we maintain that lung ultrasound provides added value beyond a standard workup (history, physical examination, chest radiograph, gray-zone natriuretic peptide values) in differentiating acute heart failure from other causes of dyspnea. The identification of B-line artifacts on lung ultrasound is a straightforward addition to the toolkit of emergency physicians and our data support its use in patients with undifferentiated dyspnea.

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