



CORRESPONDENCE

Ultrasound Diagnosis of Acute Pulmonary Edema: the Oblivion of a Great Future Behind Us

To the Editor:

Al Deeb et al. write in their conclusion: "In patients with a moderate to high pretest probability, a point-of-care ultrasound study showing B-lines can be used to strengthen an emergency physician's working diagnosis of acute cardiogenic pulmonary edema. In patients with a low pretest probability, a negative point-of-care ultrasound study can almost exclude the possibility of acute cardiogenic pulmonary edema."¹ However, as reported elsewhere,²⁻⁴ acute severe dyspnea due to causes other than pulmonary edema, including exacerbation of chronic obstructive pulmonary disease and pulmonary fibrosis, presents with the same B-line profile as acute pulmonary edema. It is therefore obvious that in a clinical scenario of severe dyspnea, preliminary diagnosis by history and clinical examination takes precedence and, in fact, is almost all that the physician and the patient need for effective intervention.

Indeed, the reference tool in acute pulmonary edema is auscultation, and the level of wet sounds,² whose features, however, not to mention the extension of lung involvement, were not reported in any of the source articles. Furthermore, those articles also fail to inform us of the ultrasound time course of the observed pulmonary edema cases, from the onset to improvement or recovery or to the worsening of the clinical situation.⁴

Al Deeb et al. appropriately address the limitations of the current statements on this subject, writing "Further studies including large numbers of ED patients presenting with undifferentiated dyspnea are required to gain more valid and reliable estimates of test accuracy in ED patients."¹ We would add that, since the diagnosis of acute pulmonary edema can be challenging, misunderstandings or mistakes are not impossible, and it is noteworthy that no short-term (minutes-hours) study is yet available, even after many years of reports and recommendations to that effect. Further studies are indeed urgently needed, provided, however, that the basic methodology is still considered sound. As quoted by Liu et al.⁵ in their intelligent but rather colorful appraisal of the situation, according to De Bono "An expert is someone who has succeeded in making decisions and judgments simpler through knowing what to pay attention to and what to ignore."

In this field we suggest that, when managing a patient with acute severe dyspnea that could be due to acute pulmonary edema, in the absence of reliable evidence of the validity of ultrasound artifacts as a diagnostic tool, "what to pay attention to" is physical examination and other scientific procedures, and "what to ignore" is the B-line count. Indeed, this is erratic at best, and we feel that research efforts would be better spent seeking to consolidate best practice in diagnostics and patient care, rather than starting out on the slippery slope to oblivion of established practice.

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