

Other Lessons Could Be Learned



To the Editor:

On the one hand, the report of pulmonary embolism attributable to initially misdiagnosed popliteal vein aneurysm was a salutary cautionary tale.¹ On the other hand, however, it was a missed opportunity to exploit the principle that a test with modest diagnostic accuracy has the potential to generate a high positive predictive value for any given diagnosis when applied in the context of high pretest probability. Point-of-care transthoracic echocardiography (TTE) is one such test. If that test had been applied to the reported case, which was characterized by the association of chest pain, breathlessness, hypoxia, hypotension, and S1Q3T3, a combination with high pretest probability of pulmonary embolism, the identification, by TTE, of stigmata of pulmonary embolism such as right ventricular dilatation,^{2,3} right ventricular dilatation in a patient with S1Q3T3 sign,⁴ McConnell's sign,⁵ and right heart thrombi⁵ would have generated a sufficiently high positive predictive value to "clinch" the diagnosis of pulmonary embolism. By the same token, the identification of those stigmata²⁻⁵ in patients with high pretest probability of pulmonary embolism proved to have high positive predictive value for pulmonary embolism when the "gold standard" for thromboembolism was subsequent documentation of pulmonary embolism by computed tomography pulmonary angiogram²⁻⁴ or identification of emboli in the right heart chambers.⁵

One of the advantages of point-of-care TTE is that it "buys" time to undertake well-thought-out risk stratification strategies. Risk stratification, in turn, is the starting point for management strategies such as conventional anticoagulation vs thrombolysis or embolectomy.⁶ It was on the basis of the risk assessments made after point-of care TTE that each of the patients²⁻⁵ received thrombolytic treatment without the prior benefit of computed tomography pulmonary angiogram.

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