CRITICAL CARE

LETTER

Microsphere contrast echocardiography in the critical care complex

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See related research by Saranteas *et al.*, http://ccforum.com/content/15/1/R54

The paper by Saranteas and colleagues [1] in the previous issue of *Critical Care* describes the use of transthoracic echocardiography (TTE) for detection of ventricular thrombus in postoperative patients in the critical care unit. While we agree that TTE is a fundamental diagnostic imaging tool that enhances detection of anatomic and physiologic abnormalities within the critical care complex, we would like to make several comments regarding its utility in this clinical setting. In up to 25% of TTE scans performed in the critical care complex, the images are nondiagnostic despite operator excellence, and this fact can have a significant impact on patient diagnosis and management [2]. We agree with the authors that, owing to the suboptimal spatial orientation of the transducer in relation to the left ventricular apex, transoesophageal echocardiography may not help in these cases.

However, we would like to propose that the use of contrast echocardiography be expanded in the critical care setting in order to clarify those 'vague results' rather than have those same suboptimal, nondiagnostic images reinterpreted by another reader. Even experienced readers of TTE cannot make an accurate interpretation of 'vague' or suboptimal TTE images. In these cases, it is clearly recommended that contrast echocardiography be performed to improve diagnostic clarity [3].

Contrast echocardiography, using contrast microspheres coupled with contrast-specific ultrasound imaging modalities, overcomes many of the limitations that cause suboptimal echocardiograms in the critical care environment [4]. Contrast echocardiographic imaging has been assessed in the critical care setting and has been shown to be safe, feasible, and accurate [2,5]. The recent contrast guidelines of the American Society of Echocardiography state that 'the availability of contrast imaging in the [intensive care unit] enhances overall efficiency, diagnostic accuracy, and cost-effective patient management and has no incremental risk for death compared with non-contrast echocardiography' [3]. For patients who are in the critical care setting and who have nondiagnostic TTE results, a contrast-enhanced TTE should now be at the forefront of a diagnostic algorithm.

Abbreviation

TTE, transthoracic echocardiography.

Competing interests

The authors declare that they have no competing interests.

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