



The value of subcostal echocardiographic assessment, and directions for future research

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To the Editor,

We read with interest the echocardiographic study by Bughrara *et al.*,¹ in which the authors compared the subcostal-only view (the so-called EASY window) with focused transthoracic echocardiography (FTTE).

In particular, the authors evaluated the agreement between EASY and FTTE approaches regarding six main components: left ventricular (LV) size and contractility, right ventricular (RV) size and contractility, interventricular septal position, and pericardial effusion. Gwet's AC1 coefficient was analysed to estimate the agreement between the approaches and overall; the authors found good agreements, ranging from 0.70 (RV size) to 0.98 (pericardial effusion).

This letter is accompanied by a reply. Please see Can J Anesth 2022; this issue.

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We congratulate the authors for this thought-provoking study as it could lay the foundations for a shift in basic critical care echocardiography (CCE) training. Recent years have seen an exponential rise in the use of CCE, with several accreditation pathways now available.² While in isolation, EASY is unlikely to provide a sufficiently reliable echocardiographic assessment for accreditation in CCE, it is possible that EASY will become the first approach novices learn. Indeed, from this acoustic window, all four heart chambers are visible, and, through a 90° counter-clockwise rotation, the inferior vena cava is apparent in most patients and this may aid in the evaluation of fluid responsiveness. Moreover, once mastered, the subcostal view allows the user to accumulate a large amount of other information with subtle manipulations of the probe. Among others,³ an off-axis (but complete) LV subcostal view can be obtained (Figure 1, panel a), RV systolic function can be quantitatively assessed using the subcostal echocardiographic assessment of tricuspid annular kick (SEATAK) (Figure 1, panel b), and the right ventricular outflow tract (RVOT) and pulmonary artery may be visualized, allowing for RVOT Doppler analysis.

Although the methodology of this prospective study is well described by the authors, we believe this pioneering study needs external validation and that more studies are needed to understand the clinical implications of this limited echocardiographic assessment compared with a more complete assessment. In this regard, the study conducted by Bughrara *et al.*¹ may benefit from full adherence to the checklist suggested by the recently published recommendations for reporting CCE research studies.^{4,5} Such recommendations are also known as the Preferred Reporting Items for Critical-Care

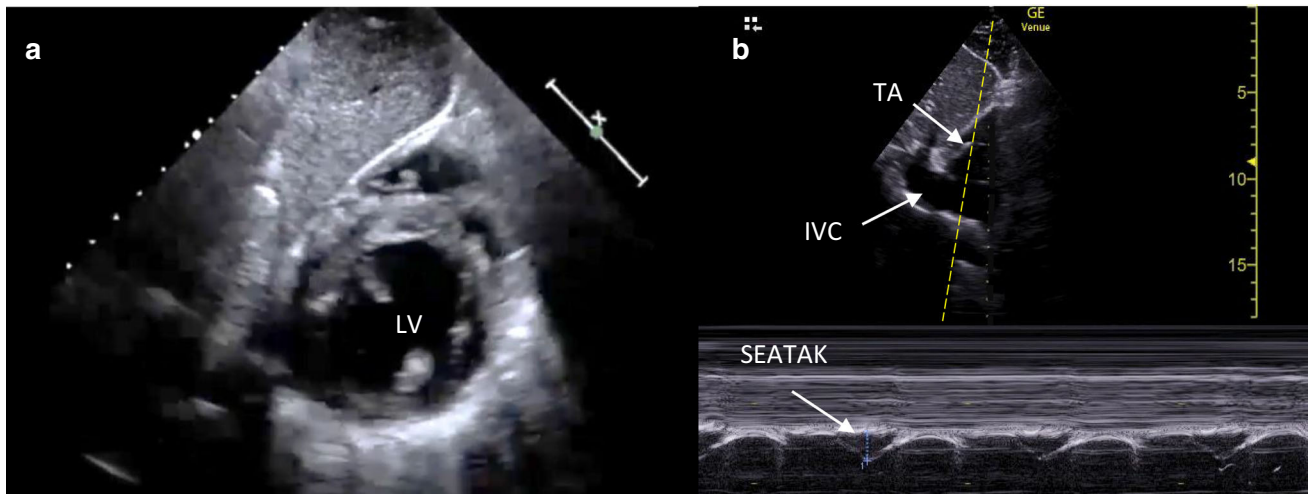


Figure 1 a) A subcostal short-axis view of the left ventricle at the midpapillary muscle level. b) Image of a subcostal echocardiographic assessment of tricuspid annular kick (SEATAK) being performed. IVC = inferior vena cava; LV = left ventricle; TA = tricuspid annulus

Echocardiography Studies (PRICES) statement, which is an expert consensus aiming at providing guidance on reporting CCE research. Full adherence to the essential items suggested by the PRICES guidelines may not only improve the interpretation of each CCE research study but also render easier between-study comparisons in the future.

Disclosures None.

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