

Correspondence

Reply to Hsue et al

TO THE EDITOR—We thank Hsue et al for their comments. First, we respectfully disagree with the hypothesis that persons with no detectable tricuspid regurgitation (TR) jet on an echocardiogram should be assumed to have normal pulmonary artery systolic pressure (PASP). It is common clinical experience in a busy echocardiography laboratory and pulmonary hypertension service to find substantial discordance between the severity, and even presence, of tricuspid

regurgitation and PASP. Compared with right heart catheterization (the gold standard for diagnosis and assessment of pulmonary hypertension), Doppler echocardiography may frequently overestimate or underestimate PASP, with the magnitude of underestimation greater than that of overestimation [1]. In some patients with pulmonary hypertension assessed by means of right heart catheterization, TR jet can be absent [1]. TR as a manifestation of pulmonary hypertension seems to be dependent on numerous factors, including age, sex, and degree of remodeling of right heart chambers; thus, many patients with pulmonary hypertension do not exhibit significant TR [2]. We agree that had we classified all patients lacking TR as having normal pulmonary artery pressures then the prevalence of any degree of pulmonary hypertension would have been approximately 28%, but this assumption is supported neither by clinical experience, our data, nor by the published literature.

Regarding the formula used to calculate right ventricular systolic pressure (RVSP), the issue raised was addressed in the discussion section of the manuscript. Variability exists with regard to echocardiographic methods used in estimating RVSP; thus, RVSP was estimated using a fixed constant of 10 mmHg added to the Doppler estimation of right ventricular–right atrial (RV-RA) gradient. This is also standard, common clinical and investigative practice [3]. Because RA pressure may vary and actual normal RA pressure is less than 10 mmHg, it has been the practice of some laboratories to adjust that constant on the basis of estimations of RA pressure determined from measurement of the inferior vena cava (IVC) diameter at rest and during inspiratory sniff. However, actual correlations of RA pressure with IVC dimensions have been modest, sniff and inspiratory effort are difficult to standardize, and the

variability of RA pressure estimation exceeds the normal—and often disease-related—range of RA pressure measured at cardiac catheterization [4]. Because few of our participants were expected to have medical conditions leading to an extreme range of RA pressure, adjustment of estimated RVSP for IVC diameter was not considered to be useful for the purposes of this study.

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Potential conflicts of interest. All authors: no conflicts.

All authors have submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest. Conflicts that the editors consider relevant to the content of the manuscript have been disclosed in the Acknowledgments section.

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