Reviewer's report

Title: A Novel Technique for Assessing and Quantifying the Interventricular Systolic Relationship

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Reviewer: Frank FL Dini

Reviewer's report:

In this study, Bruhl and co-workers evaluated the relationship between LV and RV longitudinal function by standard M-mode echocardiography and tissue Doppler imaging.

My main concern with this study is that the number of subjects was rather small and the standard echo and TDI parameters have only a limited ability to reflect ventricular interdependence.

• The use of standard M-mode echo and TDI is not a novel approach in the assessment of LV/RV function. Moreover, the parameters that have been utilized can be applied only to the assessment of longitudinal shortening of myocardial fibers. This should be mentioned in the text and the title should be modified accordingly.

• The authors should clearly explain why MAPSE/TAPSE and TDI LV/RV-systolic velocity can provide useful measures of ventricular interdependence. Is this in relation with the interpretation of the heart according to Torrent-Guasp theory?

• Ventricular interdependence cannot be evaluated solely by the assessment of MAPSE/TAPSE and TDI LV/RV-systolic velocity. In the past, this topic has been extensively addressed by several authors including Weber KT, Am J Cardiol 1981;87:855 and Slinker BK, Am J Physiol 1989;65:307. as a matter of fact, there are several types of ventricular interdependence that merit to be discussed.

• In the abstract, the sentence that RV was 64% greater than the LV means that the RV systolic velocity was 64% greater than the LV systolic velocity? This should be clarified.

• The purpose of the study is not clearly indicated in the text.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
'I declare that I have no competing interests'