Reviewer’s report

Title: The Relationship between Mitral annular systolic velocity and Ejection Fraction in Patients with Preserved Global Systolic Function of the Left Ventricle

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Reviewer: Frank FL Dini

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In the study by Daskalova, she investigated the relationship between ejection fraction and the mitral TDI-derived annulus systolic velocity in patients with preserved ejection fraction (EF >0.55) to evaluate whether the assessment of annulus systolic velocity may be used as a surrogate measure of EF in patients with poor image quality.

Although the topic of the article may be interesting, I have several concerns about the message she wants to come across.

Major comments

1. First of all, TDI-derived annulus systolic velocity only reflects long-axis function. This represents a major limitation for those who want to assess global LV function.

2. The author stated that annulus systolic velocity >8.3 cm/sec predicts a preserved EF. The author should explain this finding since the study selection criteria excluded patients with a reduced EF.

3. In a recent study, Dini and co-workers (International Journal of Cardiology, 2013) demonstrated a close correlation between the presence of LV diastolic dysfunction and an impaired TDI-derived annulus systolic velocity. Is it also the case in this study population? It would be nice to have an histogram comparing the mean values of annulus systolic velocity according to geometric patterns, presence of diastolic dysfunction and/or diabetes.

4. Which is the advantage of using TDI-derived annulus systolic velocity with respect to M-mode fractional shortening?

Minor comments

1. Please, provide table legends.

2. Please, use 0.00 instead of 0,00.

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

Quality of written English: Acceptable
Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.