Reviewer’s report

Title: Pilot study using 3D-longitudinal strain computation in a multi-parametric approach for best selecting responders to Cardiac Resynchronization Therapy.

Version: 0 Date: 18 May 2017

Reviewer: Quirino Ciampi

Reviewer's report:

In this study the authors described LV mechanics using 3D echocardiography integral-derived longitudinal strain parameters in patients eligible for CRT and to test the relevance of this new tool for predicting CRT response.

The authors concluded that this new automatic analysis of 3D longitudinal strain curves, using integral-derived parameters, provided original information on LV mechanics by combining timings and LV regional contractility data. This approach could be of value for improving patient selection for CRT.

The study is interesting.

There are some suggestions:

1. The study population is too small (only 48 HF patients) and heterogeneous (31% with ischemic etiology)
2. There are difference in 3D longitudinal strain in ischemic and nonischemic etiology of HF?
3. The scar should influence the 3D longitudinal strain values?
4. The authors should comment the time consuming of 3D longitudinal strain compared to 2D strain.
5. The authors should consider the opportunity to analyze only 18 patients without septal flash and the clinical impact of SDIL peak values and the improvement in the selection of CRT patients.

Level of interest
Please indicate how interesting you found the manuscript:

An article of limited interest
Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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