Reviewer’s report

Title: Echocardiography in patients with hypertrophic cardiomyopathy: usefulness of old and new techniques in the diagnosis and pathophysiological assessment.

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Reviewer: Rosa Sicari

Reviewer’s report:

This is an interesting and well written manuscript reviewing the difficult task if diagnosing HCM by echocardiography. There are a few issues that authors should address:

1. The genetic part is a little too long and beyond the point of the review. It would be more important to dedicate a paragraph on genetic counseling (MG Andreassi, Cardiovascular Ultrasound 2008). This is a critical issue that may important impact on the use of diagnostic testing and follow-up of patients with overt disease.

2. Echocardiography remains the cornerstone of non-invasive imaging in HCM patients even though, as clearly outlined by patients, has important limitations in diagnosing the disease. I would separate the manuscript into conventional echo methods and new technologies. It is important to state if quantitative methods have additional value in this set of patients. Fibrosis quantification can be done by integrated backscatter and authors may dedicate more space to this still experimental technique but that has been widely employed in HCM.

3. The manuscript should be split down in more clearer paragraphs. CMR it is considered the non-invasive biopsy but again authors should state clearly advantages and disadvantages of the technique.

4. A table summarizing the different echo tools may be useful for the clarity of the review.

5. The section on stress echocardiography should also include the prognostic data with conventional wall motion abnormalities since it has been previously demonstrated that test positivity is related to a bad prognosis.

6. Authors should cite guidelines for the indication to myocardial biopsy.

7. Due to the great echo and clinical experience of all the authors in this field a paragraph on clinical implications and practical impact of echo would be interesting for the readership of the journal.

8. In line with previous comment, authors should upload images with sample cases (there is no space limit).

9. The English language should be revised

Level of interest: An article of importance in its field
Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

'I declare that I have no competing interests'