Reviewer’s report

Title: Left ventricular short-axis systolic function changes in patients with hypertrophic cardiomyopathy detected by two-dimensional speckle tracking imaging

Version: 1 Date: 14 Nov 2017

Reviewer: Ozkan Candan

Reviewer's report:

Dear reviewer:

This is a study of 37 patients with hypertrophic cardiomyopathy (HCM) who were assessed with speckle tracking echocardiography focusing on circumferential, radial strain and myocardial twist mechanics. The authors have found that circumferential strain, radial strain were lower in HCM group while rotational functions were larger compared the controls. Circumferential strain was found to be decreased especially in the antero-septum and the anterior segment.

Although the idea behind the paper is interesting, there are some points that are worth mentioning:

Major issue:

1. Evaluation of longitudinal strain along with short axis and rotational movements may provide more accurate information about myocardial function.

Thus, information about which myocardial fibers are more sensitive could be obtained.

2. The greatest limitation of this study is that the relationship of decreasing short axis functions to a clinical outcome or event is not investigated.

3. Since only cardiac myocardial fiber functions are evaluated, it may be more accurate to evaluate the relationship with cardiac MR.

4. Another important limitation is the small number of patients.

Minor:

Results section: Some findings are incompatible with table 2.
- line 42-48, the middle myocardial and epicardial (not endocardial) layers of septum wall had significant…

- line 48-52, Posterior wall strain in all layers (endocardial, mid, epicardial) was greater than controls.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

Yes

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

Yes

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

**Quality of written English**
Please indicate the quality of language in the manuscript:

Acceptable

**Declaration of competing interests**
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?
4. Have you received reimbursements, fees, funding, or salary from an organization that
holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests.

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal.