Reviewer’s report

Title: Troponin as ischemic biomarker is related with all three echocardiographic risk factors for sudden death in hypertrophic cardiomyopathy (ESC Guidelines 2014).

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Reviewer: Albert Varga

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The Authors of the present manuscript compared echocardiographic parameters (prognostic for risk stratification of SCD in HCM) between two subgroups of HCM patients: hs-TnI positive and hs-TnI negative. They analyzed the data of 51 patients with HOCM and found that provoked left outflow tract gradient, left atrial diameter and maximal left ventricular thickness were significantly greater in the hs-TnI positive group. Furthermore, they concluded that "The increased value of all three echocardiographic parameters using as risk factors for sudden death are related with the elevated level of h-s troponin-I in HCM."

This is the first revision the paper. The Authors partially answered and explained my queries however there are still some remaining subjects to be clarified.

1. First, although the Authors tried to justify the "division" of risk factors of SCD for HCM, this justification was hardly acceptable.

   a. The current guidelines do not recognize this distinction

   b. "The SCDFH and syncope may be frequently not absolutely sure episodes (for example without witnesses)". According to my opinion, the family history is one of the most important predictive factors of SCD in patients with HOCM.

   c. 

2. The following sentence in the Introduction section is superfluous "We have compared hs-TnI positive versus negative subgroup"

3. One of the exclusion criteria was significant coronary stenosis on coronary angiography. How many patients underwent coronary angiography? All?

4. The Authors response to my second questions was: "We use recommended by ESC guideline (2014) stimuli to provoke LVOTG: Valsalva and standing position (please see in methodology section) we did not decide use exercise (please see the limitation section)." This is again only partially acceptable. According to the current guidelines (see ESC guidelines, EHJ, 2014, page 2743) in symptomatic patients, when the provicable gradient is less than 50 mmHg,
exercise echocardiography is recommended. According to my understanding, some of the patients had symptoms (Canadian class in the table).

5. Moreover, pre-treatment with β-blockers often reduces the incidence and severity of exercise-induced LV outflow tract gradients.

6. The description of the echocardiographic examination stems from the guidelines. Please, describe how your echocardiographer performed the examination, the workflow and which parameters were measured and how.

7. The Pearson correlation should be described in the Statistical Analysis section.

8. The rationale of performing the Pearson correlation was explained neither in the statistical analysis, nor in the Discussion section.

9. One of the principal conclusion of the Authors was (see first sentence of the Discussion section) that "Current study was a first ever report about relationship between elevated hs-TnI and all three echocardiographic risk factors (measurements was timely synchronized) for sudden death in hypertrophic cardiomyopathy (ESC Guidelines 2014)." The Authors explain the pathophysiological mechanism of this finding by ischemia (inducible?). However, left atrial dimension was also significantly greater in the troponin positive group. The Authors should provide some explanation!

10. The English language needs still an extensive revision.

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