Reviewer’s report

Title: High sensitive troponin T and heart fatty acid binding protein: novel biomarker in heart failure with normal ejection fraction?: A cross-sectional study

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Reviewer: Harald Lapp Lapp

Reviewer’s report:

Summary of comments:
The authors provide us with preliminary but very interesting data with new sensitive biomarkers measuring myocardial injury in patients suffering from heart failure with normal ejection fraction. The study was conducted well and the findings were reported sufficiently. The paper does serve the scientific process in the developing biomarkers in diseases where standard clinical tools for diagnosis do not provide us with clear and definite results. Therefore there is a rationale to test new biomarkers and with respect to prognosis to test biomarkers that measure myocardial injury and not only correlate to hemodynamics. The methods used in the study were appropriate and accurate. The findings are significant. The conclusions that are drawn from the results where justified but with respect to the limits of the study repeatedly to vague and optimistic.

In summary the article is original, accurate and relevant, although it has several limitations in sample size, methods and discussion.

Major Compulsory Revisions
1. given the subject matter, the authors should discuss more, that HFnEF-Patients were older, had more CAD, had higher blood pressures, higher myocardial mass and more diabetes and pre-diabetes
2. given the subject matter, the authors should
   a. equalize the results in the main paper and the summary (“…whereas hsTnT was not significantly different between the LVDD and controls (p=0.068)”)
3. given the small numbers, the authors should
   a. be more careful in drawing conclusions, particularly with respect to prognosis and recommendations to the biomarkers impact on treatment
   b. think to remove the subgroups of CAD and non-CAD in table 3
4. In the introduction more explanations to h-FABP, its source, biochemistry, kinetics should be provided
5. The hs-Troponin-Test is explained extensively, whereas the assay for h-FABP is not described

Minor Essential Revisions
1. Data on the results of the oGTT are interesting but are not further discussed or
contribute to different analysis

a) Data are of limited significance because only 95 out of 130 were tested

b) I would suggest to divide in Diabetes and Non-Diabetes

2. “…diagnostic criteria as recommended by the European Society of Cardiology were met.” A reference should be provided

3. Not CAD patients should be described more accurately. Where they free from atherosclerotic disease or had they plaque with diameter stenosis <50%. This may be a difference

4. Citations 13, 14, 27, 28 are incomplete

Discretionary Revisions

1. „Roche Diagnostics, Penzberg, Oberbayern” – Oberbayern is a region not a nation or country, should be changed to “Germany”

Literature:

1-3


Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

'I declare that I have no competing interests'