Reviewer’s report

Title: Lack of genetic susceptibility in takotsubo cardiomyopathy A case-control study

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Reviewer: Wen-Yi Yang

Reviewer's report:

By selected subjects with Takotsubo cardiomyopathy (TCM) or CAD or not any of the two diseases from the Swedish Coronary Angiography, the authors used a case-control study to replicate the previously reported susceptibility SNPs in relation to the prevalence of TCM. Considering the relatively low incidence of TCM, the sample size of current study was not small. The non-significant result is still relevant.

1. The biggest concern is that the genotyping methods. As the flowchart of subject recruitment is not well described. We cannot assess the genotyping call rate in current study for the studied SNPs. If using 665, number of final studied subjects as the reference, the call rate of three SNPs were 94.3%, 97.6% and 94.6%, which were rather low and not acceptable for genetic analysis with relative small sample size. Could the authors clarify the overall call rate (per SNPs) in a clearer manner and report how many samples had clear genotype for all three SNPs as well.

2. By saying that, a clearer flow-chart than the Figure is really helpful, especially the information about the participants who had bad DNA sample quality or missing genotype.

3. The second concern is the CAD control. The authors used the terms of "ACS" and "CAD" in the context. Clinically, "ACS" is a temporal diagnosis pending for the confirmation of myocardial infarction or unstable angina pectoris. The authors need to clarify if CAD as for control in current study was a composite definition of MI and angina pectoris or not. Would it change the results if only the MI patients were included as control?

4. The significance was set as P ≤ 0.05 as conventionally without clarification of one-side or two-side assessment. Concerning the results of previous studies, I am wondering whether the results would be changed if one-side statistic is applied.

5. The allele and genotype frequency should be reported before the main results, could be table 2. The odd ratio estimate, then, could be table 3.

6. The main results reported in the text contained no summarised numeric information (OR and P value or CI and so on).
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

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