Reviewer's report

Title: Analysis of risk factors of acute myocardial infarction in young patients

Version: 2 Date: 30 May 2014

Reviewer: Andreas Schoenenberger

Reviewer's report:

I read the manuscript by Wang YY et al. with great interest. However, the manuscript needs major revision, before it is acceptable for publication. Overall, the manuscript should better adhere to international standards of scientific writing.

1. The abstract is weak. It should focus on the most relevant findings which support the conclusion. The most important numbers should be provided within the abstract.

2. The introduction fails to summarize what is currently known about this topic.

3. The description of methods is incomplete. In particular, the study population remains unclear. Were these consecutive patients admitted to the hospital? Were all admissions recruited? How many were not recruited or excluded? Why did the healthy young population undergo angiography? Were these really healthy young people? Why are there only 65 old MI controls during the study period? How many were not included? Answering these questions would help to better understand the study population and whether there was relevant selection bias. Besides: the authors should not report results within the methods.

4. The AMI definition used by the authors is not the definition currently being the standard.

5. The authors should provide a rationale why exactly these baseline variables were selected. For example, I wonder why body mass index was not assessed.

6. The multivariable logistic regression should be exactly described (e.g., population in the model, rationale for selection of variables).

7. The discussion does not elaborate concisely what the study adds.

8. The description of limitations is incomplete.

9. The conclusion is far too strong. The study is not adequately powered and the available variables not complete enough to show that fibrinogen and HbA1c are independent risk factors for acute myocardial infarction. In addition, the study does not document causality; the present study only shows an association. Furthermore, it is not a novelty that fibrinogen or HbA1c are associated with myocardial infarction.
10. The references are not cited in the text in the correct order. Some references are missing in the list. Previous relevant studies in the field are missing.

**Level of interest:** An article of limited interest

**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.