Reviewer's report

Title: Optimal Strategy of Primary Percutaneous Coronary Intervention for Acute Myocardial Infarction due to Unprotected Left Main Coronary Artery Occlusion: study protocol for a randomized controlled trial

Version: 0 Date: 20 Jul 2018

Reviewer: Xiankun Chen

Reviewer's report:

This is a very interesting study to evaluate the efficacy and safety of deferred stent implantation for acute myocardial infarction due to unprotected left main coronary artery occlusion.

1. As there are 30 hospitals involved in this study, are all these hospital in the same city? Or in the same region of China, like the south or the north? Are they all third-grade class-A hospitals? It might be better to have some more details of these 30 hospitals.

2. Are all these 30 hospitals required to randomize a certain number of patients to participate in the study?

3. Has the randomization been stratified in consideration of the hospitals?

4. In study design, it is recommended to specify this is an 'open-label' study.

5. The author has stated in the main text "We choose to enroll patients with AMI but not STEMI because a certain number of patients with left main coronary artery occlusion present non-ST-segment elevation myocardial infarction (NSTEMI) instead of STEMI". This sentence gives me an impression that this study will exclude patients with left main coronary artery occlusion present ST-segment elevation myocardial infarction (STEMI). If yes, the author should specify in the exclusion criteria. If not, please rephrase this sentence to avoid misunderstanding.

6. For the inclusion criteria, why to have an age upper limit of 80?

7. For the inclusion criteria, it will be better to have this as the forth one: "TIMI flow grade 3 achieved after pretreatment of thrombus aspiration or balloon dilatation"
8. For the exclusion criteria "life expectancy less than 1 year", how will the investigators judge one patient's life expectancy?

9. Will the author exclude those who are unable to sign the informed consent, like unconsciousness?

10. When and who will conduct the informed consent?

11. I am confused about the timing and procedure for patients to sign the informed consent. Will patient sign the informed consent BEFORE the primary angiography (the eligibility of achieving TIMI 3 is not possible to be confirmed at this time)? Or will they sign the informed consent after achieving TIMI 3 DURING the primary angiography (it might be difficult for patients to sign anything or make any decision when they are lying on an operational bed)? Therefore, it might be better for the author to specify the way to get the informed consent from patients.

12. After one patient having been randomized to the deferred stenting group:

   What will be done if the interventionalist think the patient unsuitable for deferred stenting due to some practical reasons or patent's clinical situation?

   What will be done if the interventionalist think the stent implantation could be waived during the second PCI?

   What will the author deal with these cases during statistical analysis?

13. For those randomized to deferred stenting group, will the second PCI be conducted within the same hospitalization period as the first PCI?

14. For those randomized to deferred stenting group, please specify the treatments during the "deferred period"? As this will contribute to the effects on clinical outcomes.

15. In the paragraph of sample size, please rephrase the first sentence. In addition, the author did not mention the α level for sample size calculation.

16. The author did not mention how they will collect data about the patient characteristics and procedure related variables.
17. For the primary endpoint, the author use a composite outcomes of cardiac death and recurrent myocardial infarction. It might be better to use "all-cause mortality" instead of the "cardiac death" because "all-cause mortality" reflect an intervention's net benefit.

18. For the outcomes, it will be better to have a definition for all clinical events and who will adjudicate these clinical end points?

19. The author should clearly specify the timeframe for each endpoint.

20. It will be better that the author give detailed information on how to collect data on the primary and secondary outcomes, patients' baseline characteristics, clinical events.

Level of interest
Please indicate how interesting you found the manuscript:

An article of importance in its field

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

Needs some language corrections before being published

Quality of figures
All images and figures within the manuscript should be genuine i.e. without evidence of manipulation. No specific feature within an image may be enhanced, obscured, moved, removed, or introduced. If you have concerns about the veracity of the figures you should choose the first option below.

Statistical review
Is it essential that this manuscript is seen by an expert statistician? If so, please give your reasons in your report.
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

Were you mentored through this peer review?

No