Reviewer's report

Title: Association between Older Age and Outcome after Cardiac Surgery: A Population-Based Cohort Study

Version: 1 Date: 7 September 2014

Reviewer: Toshiro Kobayashi

Reviewer's report:

Minor Essential Revision

Wei et al described in this paper about association between older age and outcome after cardiac surgery. This paper suggested four findings. Octogenarians receiving cardiac surgery appeared to be increasing, and had significantly higher short and long-term mortality compared with younger patients. They were more likely to require combined procedure, and had longer duration of ICU stay, hospitalization and higher rate of mortality. It thought to be natural phenomenon because older aged patients were physiologically deteriorating. This paper is a large volume study and data were collected prospectively with their database. This paper thought to be valuable to be published in journal.

1. In the section of statistical analysis, author described (aortic cross time), clamp was missing. Aortic cross clamp time is right?

2. In the section of results, sentence of (mortality) is difficult to understand.

3. In the section of post-operative complications and health service utilization, abbreviations (CRRT, CVICU) are not common words. Author described full spelling in the paper too.

4. This paper utilized APPROACH database. Do this database include patient’s cause of death? If so, authors should describe about cause of death based on cardiovascular event or not.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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