Reviewer’s report

Title: Heart valve operations associated with reduced risk of death from mitral valve disease but other operations associated with increased risk of death: A national population-based case control study

Version: 0 Date: 21 Jul 2019

Reviewer: Tomoko Tani

Reviewer's report:

I thank for your submission.

This paper shows the analysis of the death risk from heart valve disease with respect to the frequency of heart valve operation and other operations in patients with mitral valve disease.

This is an interesting manuscript. Unfortunately, there are many major problems in this study and manuscript.

1) Several English grammar and words mistake are present throughout the manuscript and need to be proofed a native English speaker and writer.

2) The following abbreviations are not common and therefore, are confusing.

   MVD, HVD, HVO, MVO

   Author had better not use these abbreviations.

3) Disease diagnoses were based on the International Classification of Disease, Ninth Revision, Clinical Modifications (ICD-9-CM). Therefore, this study has some limitations and problems.

   • Mitral valve disease contains various diseases, for example, mitral regurgitation, mitral stenosis. Moreover, various degrees of disease are included.
   
   These are important matters.

   • Author did not analyze the reasons of re-operation. The reasons of re-operation could influence the prognosis.

   • How did author analyze the patients with both mitral valve and aortic valve disease?

4) Discussion is insufficient. There are many repetitions of results in Discussion.

   Author should describe the considerations for results.

5) Page 12, Line 6
"Our results indicate that performing more HVOs could reduce the mortality rate of patients with MVD; conversely, more total operations could increase the mortality rate of patients with MVD."

Author should describe the consideration of these results.

6) What is clinical implication of this paper?
   Author should describe clinical implication clearly.

7) Page 17, Line 12, Figure 2
   These figures are not the ROC curve. Therefore, please describe the data of the ROC curve in Results, not figure legends.

8) Page 18, Table 1
   Comorbidity is insufficient.
   Please add the data about anemia and the presence of hemodialysis.

9) Page 21, Figure 2
   What does "age" mean?

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

An article of limited interest

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

Not suitable for publication unless extensively edited
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