Reviewer's report

Title: Ratio of Preoperative Atrial Natriuretic Peptide to Brain Natriuretic Peptide Predicts the Outcome of the Maze Procedure in Mitral Valve Disease

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Reviewer: Young Keun On

Reviewer's report:

In this manuscript, Sato et al performed an interesting study and demonstrated that preoperative ANP/BNP ratio is related with the restoration rate of sinus rhythm after maze operation in patients with mitral valve disease. This is an interesting study and the manuscript is well written. However, there remain several limitations beyond what the authors have already acknowledged.

1. The authors assessed the maze procedure outcome based upon the cardiac rhythm after the procedure by electrocardiography or 24 hour Holter 6 months after surgery. However, the criteria of AF recurrence is not clear. Detection rate must be different between 12-lead ECG (representing rhythm status for only 10-20 seconds) and 24hr holter. Therefore, any patient with paroxysmal AF could be classified into AF or sinus group depending on the rhythm status when they underwent especially only 12-lead ECG. The authors should clarify at least how many patients underwent holter and 12-lead ECG alone, respectively, and acknowledge this limitation as well.

2. Is there independent association between maze success and the preoperative ANP/BNP ration on multivariate analysis?

3. In a study from Saito et al (Circ J 2007; 71:70-78), interstitial fibrosis between LA appendage and left atrial free wall showed no significant difference. What is the biologic rationale on the difference shown in especially Figure 3 a and Figure 3b.

4. As the authors have mentioned, the plasma BNP level can be altered by renal function. It would be interesting if the authors give some data on the CCr or Cr level between the two groups.

5. Consider to use LA volume index instead of LA diameter.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.
Declaration of competing interests:

I declare that I have no competing interests.