Reviewer's report

Title: Bipolar radiofrequency ablation is useful for treating atrial fibrillation combined with heart valve diseases

Version: 2
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Reviewer: Spencer J Melby

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This is a report made of a series of patients who underwent valve surgery and some portion of the Cox-Maze procedure. Although it is a very large series with good reported outcomes, there are several points which should be revised and or fixed prior to publication.

Compulsory
1. The authors did not report the lesion sets. This is critical to the success of any Maze procedure.
2. Did not quote current literature, specifically on outcomes with MV replacement with Maze (old citations made, there are leading surgeons who have done excellent work in this field and reported their outcomes which are not referenced).
3. Did not define the type of afib in patients according to current standards (e.g. AHA definitions).
4. Did not report outcomes based on known definitions of success by AHA/ACC.
5. Did not reference articles detailing the efficacy of bipolar radiofrequency ablation (although in the text they discuss this, the references used are not pertinent to what is discussed).
6. Poor English throughout which makes several parts difficult or impossible to understand. Some statements are obviously wrong.

Minor essential revisions:
1. Many of these are related to the poor English and poor translation.
2. What is LV wall fracture III? There were 2 cases of posterior wall fracture of the left ventricle with occurrence rate of 0.62%. One appeared 8 hours after transferred to ICU, the other appeared after the machine shut down, and the two patients were all recovered.

Later another statement is confusing. What is posterior wall fracture? Is this atrioventricular dehiscence? What “machine shut down” there should not be any surgery on the left ventricle unless debridement from the annular calcification of the valve caused an A-V dehiscence (usually fatal). This is difficult to understand.

3. The authors state: “For those had operation before or with pericardial adhesions, severe bipolar ablation operation should not be performed.” Based on what information? This is an untrue statement, a relative contraindication, yet the
authors state it twice.

4 Outcomes reported as “should”—we need to know what was done, not what should be done

5 “All patients had implanted pacemaker” This is stated but confusing—did they have temporary or permanent, when, etc? It is also stated that no patients had a pacemaker.

6 “In this study, surgical isolation of the pulmonary veins was 20 to 35 minutes until the completion of ablation” --this is likely wrong, as the ablations usually take seconds not minutes

7 reporting this complication is nonsensical: “and left atrial pressure is very high after thoracotomy and up to 26 mmHg, which indicated intact function of valve in vitro blood ring exploration butdied in the operation because of the difficult of shutting down machine.”

8 This statement is hard to understand, I don’t know what is being state

In addition, in the process of separating the left and right pulmonary veins by bipolar radiofrequency clamps, the fore-arm and the post-arm may interfere with each other. Therefore, the ordinary catheterization tube-guided bipolar radiofrequency clamp technique (Figure 1 and Figure 2) was used.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Not suitable for publication unless extensively edited

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