Reviewer's report

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

Version: 2 Date: 27 September 2013

Reviewer: Myura Nagendran

Reviewer's report:

- 1] Overall, it is hard to follow many parts of the study report due to grammatical errors. While the study utilises a large cohort of patients, it is purely observational (as opposed to controlled) in nature and consequently does not add much more to the existing literature on safety and efficacy of bipolar RF ablation for treatment of AF during concomitant cardiac surgery.

MAJOR REVISIONS:

- 2] Abstract --> Must state that this is an observational cohort study in either the background or methods.
- 3] Abstract --> The results state that 322 patients were cured but that only 287 patients were in sinus rhythm. What is the definition of 'cure' in this regard? And at what time point is this? 12 month follow up? Both must be reported.
- 4] Materials and methods --> In the general information section, should this say 136 males and 188 females instead so that it adds up to 324?
- 5] Materials and methods --> Is the definition of persistent AF lasting more than 7 days and were the ECGs performed at least 7 days apart to confirm this?
- 6] Materials and methods --> Under the methods sub-heading, last paragraph, it states that all patients had a pacemaker. What group does this refer to? The abstract states that only 213 patients received temporary pacemakers.
- 7] Tables --> I cannot make comment on these as they were not present in the manuscript file (only one supplementary table present in the appendix file). This has clearly made it harder to interpret and review the results.
- 8] Results --> There is repetition with the methods section on the number of patients undergoing various valvular procedures. This should be in one section or the other and I would favour placement in the results section.
- 9] Results --> The confusion re: pacemakers is again present here: "All patients had implanted pacemaker. Because of the slow heart rhythm in the ICU, 213 patients received temporary pacemaker (65.74%)." This needs to be clarified.
- 10] Results --> See point 3 in abstract re: cure definition
- 11] Results --> I can see that the long term sinus rhythm conversion rates are reported in the discussion but they should be stated in the "postoperative follow up" section of the results.
- 12] Discussion --> There is no mention of study limitations, this must be included.

- 12] Discussion --> There is very little discussion on the comparison of these results with the existing literature. This must be expanded upon.

**Level of interest:** An article of limited interest

**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 was part of the EACTS (European Association of Cardiothoracic Surgery) writing group for the EACTS guidelines on surgical treatment of atrial fibrillation that were published last month.

I declare that I have no other competing interests.