Reviewer's report

Title: Left Atrial Volume Predicts Adverse Cardiac and Cerebrovascular Events in Patients with Hypertrophic Cardiomyopathy

Version: 1 Date: 28 September 2011

Reviewer: Rosa Sicari

Reviewer's report:

In the present study Tani et al. hypothesize that left atrial volume is related to adverse outcome in patients with hypertrophic cardiomyopathy. The manuscript addresses a relevant clinical issues in a selected population. However, there are several issues that authors should address:

1. Please give details on how the diagnosis of HCM was done. This is not clearly stated in the methods section of the manuscript.
2. Please clarify why the time of enrolment is 2 years, 10 years ago.
3. The description of events is quite poor. Please detail this section of the manuscript.
4. Please clarify how the final population of 102 was reached from 141.
5. Please do not separate the population characteristics on the basis of events occurrence.
6. Please prepare a table with the description of events distribution.
7. There are several factors that may influence outcome in patients with HCM and the occurrence of stroke and left atrium enlargement. Please address.
8. The Cox model is built to demonstrate that LA volumes would predict events. However, it would be relevant to perform a conventional survival analysis with all the parameters and demonstrate that LAVi is an independent predictor of events.
9. It is not clear why authors use LAV/BSA for KM curves which is not significant in the Cox Model.
10. In order to have a more accurate statistical analysis with the cut-off parameters used a reclassification analysis should be used. In other words, how many subjects are identified at higher risk of experiencing events once to the model in a ROC analysis the LA measurements are added.
11. When using left atrial volume please cite and discuss the work of Nistri et al (EJE 2011) which may have important implications in the normality values.
12. MR influences in a relevant fashion LA volumes. Please address.
13. The discussion is unfocused and should discuss novelty and clinical implications of the present results.

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

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

'I declare that I have no competing interests'