Reviewer's report

Title: Comparison of clinical outcomes in patients undergoing mitral valve replacement with mechanical or biological substitutes: a 20 years cohort

Version: 1 Date: 2 August 2014

Reviewer: Bahaaldin Alsoufi

Reviewer's report:

Thank you for providing me with the manuscript titled “Comparison of clinical outcomes in patients undergoing mitral valve replacement with mechanical or biological substitutes: a 20 years cohort” to review.

In that submission from Brazil, the authors review outcomes of 352 patients who underwent isolated MV replacement from 1990-2008 with a focus on comparison between tissue and mechanical valves. The statistics is simple and descriptive. Their findings as well were expected such as the patients receiving tissue valves were older, survival in tissue valve recipients was lower, reoperation was higher, and bleeding complications in mechanical valves were higher. Also, they found that the baseline characteristics of patients determined survival. Resource utilization was significantly higher in the tissue valve group but that can be related to the age difference and the more frequent emergency status in those patients. Some of the differences did not reach statistical significance but that might be due to the cohort size and event numbers so the study might have been underpowered to detect those differences.

Nonetheless, there is no new information provided in this manuscript, the value and priority for its acceptance is modest.

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