Reviewer's report


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Reviewer: Patrizio Lancellotti

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The present paper sought to evaluate the hemodynamic performance of aortic prosthetic valve Carpentier Edwards Standard and Carpentier Edwards Magna (CEPM) using echo. 377 consecutive patients were examined by Doppler echocardiography evaluation within 7 days after surgery. Both aortic bioprostheses had favourable hemodynamic profile. However, CEPM seemed to have a better hemodynamic profile. The paper is well written. Few issues need to be addressed.

1. There are 2 ways of calculating EOA after surgery. One is using the LVOT diameter measured in the patient. The other is to the size of the prosthesis. It would be interesting to show both ways of getting the EOA. Moreover, it is not clear if EOA provided in the paper derived from the manufacture or from direct patient measurement. This is of importance on how to define the presence of PPM. This will also affect your final results. Indeed, the small differences between groups regarding the valvular gradients and EOA probably relate to such features.

2. Avoid using “tend” in the following sentence. “CEPM we noticed a trend toward lower of gradients and higher area in” (table 6 and 7) - but in fact is not significantly. This changes the way of your conclusion that seems to be too strong as compared to your data.

3. The presence of physiological intra-prosthetic regurgitation and/or para-prosthetic leak was investigated but we don’t have the indication of the incidence.

4. How many patients were in AF in each group. How did the deal with this?

5. It would be interesting to know if the LV dysfunction was more severe in CEPs group. Range and mean values LVEF should be provided.

6. In the tables (4 and 5), we should have the number of patients in each group (for each ring size), Please change comma by dot (also along the text).

Level of interest: An article of importance in its field

Quality of written English: Acceptable
**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