Reviewer's report

Title: Is distortion of the bioprosthesis ring a risk factor for early calcification?

Version: 1 Date: 29 August 2010

Reviewer: José M González Santos

Reviewer's report:

The authors describe a relationship between the distortion of the ring and early calcification of pericardium Mitroflow aortic bioprosthesis in a brief communication. This is a new and interesting finding for the possibility of being detected through simple radiological tests. However, the fact that all patients who require reoperation due to SVD show some degree of ring distortion does not imply an unquestionable causal relationship.

The manuscript adhere to the relevant standards for reporting and data deposition. The title and abstract accurately convey what has been found and the writing is acceptable.

Mayor Compulsory Revisions

1. It would be indispensable to have some information on the ring status in patients without SVD. Data could be obtained from the overall population receiving the prosthesis or from a representative sample. It could be that distortion of the ring was a common finding in patients with this type of prosthesis.

2. Paper is focused on early calcification as seems to have happened in some cases, but reoperation ranges indicates also late failures. Authors should clarify the relationship between ring distortion and timing of valve failure.

Minor Essential Revisions

3. Based on the authors data, it should be concluded that relationship between the distortion of the ring and the SVF is possible rather than state that it is strong.

Discretionary Revisions

4. It would be interesting to show some radiological images of not deformed prosthetic rings to compare them with those of degenerated valves. Most of the bioprosthesis had a non perfectly circular ring with some degree of scalloping.

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 interest