Author’s response to reviews

Title: Effectiveness of anticoagulant therapy in the treatment of post-TAVI bioprosthetic thrombosis

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Author’s response to reviews: see over
Reviewer’s report
Title: Effectiveness of anticoagulant therapy in the treatment of post-TAVI bioprosthetic thrombosis

Version:1 Date:10 October 2014
Reviewer: Dominique Himbert

Reviewer's report:
The authors report the case of thrombosis of a SAPIEN transcatheter valve which occurred 5 months after the procedure and was successfully treated with anticoagulant therapy.

General comments
This is an additional case of transcatheter valve thrombosis in the first few months after TAVI. It emphasizes that the diagnosis should systematically be considered in case of rapid increase of transvalvular gradients and confirms the effectiveness of anticoagulant therapy in such a setting. However, a number of similar cases have already been published, of whom several have unfortunately been omitted in the present discussion and references. Another issue raised by the paper is the indistinct use of the terms “pannus” and “thrombosis” for designing the same disease. The histology, location, timing of occurrence and treatment of both disorders are completely different. The present paper reports a case of thrombosis, not of a pannus. From a didactic point of view, making the difference is crucial.

*We have added the omitted cases as well as a recent review on Heart Valve failure following TAVI procedure. Furthermore, we have decided to delete all references regarding pannus throughout the manuscript, the main diagnosis thus remains valvular thrombosis.*

Specific comments
- Page 1, background:
  - “Valve replacement represents a safe....”: Do you mean: Transcatheter valve replacement...

*Yes, this has been corrected.*

- “Current guidelines empirically recommend single antiplatelet...: this is not the case. In most TAVI studies and programs, a double antiplatelet therapy with aspirin and clopidogrel has usually been advocated, at least for the first 3 to 6 months, in the absence of concomitant anticoagulant therapy.

*We have corrected this statement accordingly and have added complementary references*

- Several references have been omitted and should be added:
We have made the proper verifications as suggested and, in addition to the above references, we have added the following 4 references in the manuscript. 


- Page 1, case presentation: 
  - “Annulus: 23m”. You mean 23mm 
    This has been corrected. 
  - “Mean gradient=30mmHg”: seems low for a severe aortic stenosis with normal LVEF. 
    This was the initial measurement; it is below the recommendations, although Valve Area was 0.85 cm². 
  - STS score should be mentioned 
    STS score has been added to the manuscript 

- Page 2: 
  - “without visible subaortic or thrombus obstruction”: However, figures A and B clearly show severe thickening of the leaflets, very suggestive of thrombus. 
    This has been corrected accordingly. 
  - Early degeneration has been evoked. Are there reports on bioprostheses degeneration 5 months after surgical or percutaneous implantation in the literature?
No, at this point, there is none; early degeneration is described after 5 years or more of follow up for TAVI in a few cases.

We have removed this paragraph from the manuscript.

"disappearance of the pannus": there was no pannus, but leaflet thrombosis!

This has been corrected.

Did the patient remain 3 months and a half in hospital?

No, this point is now clarified in the manuscript.

Discussion:
The authors state that the overall durability of pericardial valves used in TAVI > 90% at 10 years. This is an extrapolation of the durability of surgical bioprostheses to transcatheter valves, which cannot be accepted. There are many differences between them, which may lead to important disparities in their durability. For transcatheter valves, the maximal follow-up does not exceed 5 to 6 years, and is much less for the large majority of patients.

The reviewer is correct, this was indeed an extrapolation. This has been corrected and the paragraph removed.

• Page 3:

The discussion of literature is not comprehensive, as several papers have been omitted.

As suggested, the discussion has been further developed following the inclusion of several additional papers.

The authors wrongly use the term of pannus instead of thrombosis. Pannus is located on the ring of prostheses and constituted by fibrous tissue, not by thrombus. Here, there are obvious images of leaflet thrombosis on Figures A and B.

This has been corrected.

• References:

Ref 1 is not adequate and should be replaced by the version 2012 of the guidelines published in the European Heart Journal.

This has been corrected.

Ref 2 should be replaced by that in the European Heart Journal.

This has been corrected.

All the references on the same topic which have been omitted should be added.
These references have now been added.

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

Quality of written English: Needs some language corrections before being published

The text has been closely revised and edited accordingly.

Declaration of competing interests:

'I declare that I have no competing interests'