Reviewer’s report

Title: Totally Biological Composite Aortic Stentless Valved Conduit for Aortic Root Replacement: 10-year Experience

Version: 1 Date: 9 March 2011

Reviewer: Pascal Dohmen

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Introduction:

The statement of the authors on ARR by patients suffering from AAA and AVR is not correct. The standard should be David/Yacoub operation and if this is not possible one could perform a Bentall procedure. Patients suffering from aortic valve stenosis with AAA a Bentall procedure is the choice.

Pulmonary autograft implantation as root should not be mentioned as a standard. We know from Sievers et al better to perform subcoronary implantation or using supporting tissue/materials for the root to avoid dilatation. This has been well documented in the literature and therefore root replacement with pulm. Autograft is not the golden standard.

The high euroSCORE was add or Log? It is difficult to understand this high mean value as 60% are male, 30%< 65yrs, only 5% infection, 84% first surgery etc. By aortic surgery and other surgery and 68 (mean) only a value of 8 was calculated. What is the reason for this difference?

Where was the temp measured by circ arrest? Was there additional cerebral perfusion?

Data collection and guidelines. Ref should be given.

13% of 80% had a dissection 6 % infection. What was another reason to replace the root?

How is it possible to make a statement about post-operative echocardiographic evaluation without showing them in the paper?

It would have been useful to have immunohistological evaluation about the explanted valves showing absence of macrofages, monocytes etc.

How do the authors support the statement about the valves to be covered by human endothelial cells rather than porcine endothelial cells? Have they performed DNA investigations?

What is mentioned with low life exp. Should this be short..?

Data of Ross operation are not complete, as meanwhile people know that
outcome is depending on the procedure and surgeon. This should be added in
the discussion.

Ref 24. should be modified.

**Level of interest:** An article of limited interest

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

**Statistical review:** No, the manuscript does not need to be seen by a
statistician.

**Declaration of competing interests:**

no