Reviewer's report

Title: Mid-term results of the first 150 TAVI results comparing apical versus femoral approaches

Version: 2 Date: 23 June 2015

Reviewer: robert kleinloog

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REVIEW OF ARTICLE:

Page 1 - Title page no changes
Page 2 - evaluation of medium and long term outcome. Consecutive patients to receive TAVI implants in our population
Page 3 – methods and patients leave out the words closed aortic stenosis
Page 5 - 66% exhibited Class III dyspnoea. the echocardiographic features of presented in Table II, the mean gradient and aortic orifice area were 52 ....

At the bottom of this page – the six patients that died immediately during the operation and two failed procedures need to be elucidated. Were these procedure related, prosthesis related or complications related or anaesthetic related deaths. An explanation is needed for the two failed procedures whether this was again procedure or prosthesis related.

Page 6 – In the first line it needs to explain why the six patients died in the operating theatre. Whether this was procedure, prosthesis related or complication of procedure related.

Page 7 – under complications the fitment of pacemakers need to be allocated to the different valves i.e. how many Edwards Sapien Valves and how many Core Valves received pacemakers.

Page 8 – the Authors need to elucidate the reasons for the unsuccessful cases which amounts to 5.4% i.e. were they related to the prosthesis or not.

In the manuscript no mention is made of patients who suffered cerebrovascular accidents although in the mortality figures one patient died after been confined to the post CVA suite. This is a discrepancy. Furthermore if there had been zero incidences of stroke or cerebrovascular accidents then this would be the first report in the literature where 150 consecutive cases were done without a single stroke. The latter being the Achilles heel of this procedure. Twenty patients (13.3%) had documented cerebrovascular disease at baseline. In the postoperative complications table only one patient had a haemorrhagic CVA. The Authors need to state this extraordinary result of only one stroke in 150 patients starting with twenty documented cerebrovascular disease.

In the complications table mention is made of three patients that had a sudden
death. This needs to be explained where and when this occurred.

Three patients were on renal dialysis preoperatively while fifteen patients were documented to have renal failure postoperatively. This needs to be elucidated or explained. In the discussion there should be more emphasis on paraprosthetic regurgitation, in view of the fact that the paravalvular leak had reduced from 51% postoperatively to 13% at six months but there was a significant increase to 19% at one year to 32% at two years. This needs to be discussed.

Mention should also be made of the mitral regurgitation which had increased from 42% preoperatively to 76% in two years of which there was a significant proportion in Grade II i.e. 44%. This needs further dissection explained or supported.

**Level of interest:** An article of importance in its field

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

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I have no conflict of interest