Reviewer's report

Title: Outcome of mitral valve plasty or replacement: a comparative cohort study.

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Reviewer: Rune Haaverstad

Reviewer's report:

Background, material, and design:
The aim of the study is relevant as the main outcome variables are survival, reoperation and recurrence of mitral regurgitation.

There are several basic problems:
- The comparison between groups reveals severe difficulties in this study.

Examples:
- Why include mitral stenosis when analyzing recurrence of MR? In the MVR group there were 47 with MS, only 3 in the Mpl group. Further 10 of the MVRs were redos, only 2 of the Mpl.
- AF: How many were chronic vs. paroxysmal? And what was the size of the left atrium? To what proportion was the auricle closed in each group? Did this matter regarding severe events?
- Ecco: What protocol was followed at inclusion for grading of MR? It is strange that no patients had MR IV - ? At what severity degree was AR, AS and TR, respectively? Was there any ecco protocol at follow-up ?
- Etiology here used as = Pathology: A large majority of degenerative pathology was treated with Mpl; only 13 with MVR; this make comparison very difficult. Further 46 vs 34 had unknown etiology (pathology?); there was actually a surprisingly large group of unknowns.
- What was the definition of “sequela endocarditis”? Where there no acute endocarditis? If not that was surprising.
- Some (how many?) patients received a telephone call as follow-up; what was the questions?

Statistics and structure of the paper:
The statistical analysis is extensive and impressive. However, the description of the statistics is far too extensive and dominating throughout the manuscript, including within the results chapter.

Discussion:
The discussion is too much focused on previous reports and to a less extent discussing own results versus references. The structure of the discussion needs substantial improvement to make it interesting.
Table/Figs: Generally acceptable, but need revision if the material is restructured.

Language:
There are a lot of spelling mistakes. The manuscript warrants substantial improvement regarding language.

Conclusion:
The study-material has basically potential for an acceptable manuscript as the statistics is advanced, but need a major revision. Professional language check should be recommended.

Level of interest: An article of importance in its field

Quality of written English: Not suitable for publication unless extensively edited

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

Declaration of competing interests:
No disclosures