Reviewer’s report

Title: Fluid upstream shear stress of rabbit aortic stenosis inhibits neointimal hyperplasia by promoting endothelization after balloon injury

Version: 0 Date: 19 Jul 2017

Reviewer: Francesco Vieceli Dalla Sega

Reviewer's report:

This a study on the effect of shear stress on e neointimal hyperplasia in response to balloon injury in a rabbit model. Data are novel, the topic is of interest, and the paper is scientific sound.

My main concerns is that throughout the paper the different conditions of shear stress are not well defined and that the changes in the shear stress in the animal model are not validated. For this reason, is not possible to ascribe biological differences observed between the experimental groups to changes in SS.

- Authors should define different types of SS and should better explain which type of SS they are referring to throughout the paper (i.e. Low SS, High SS, or Low and Oscillatory SS).

- Shear stress changes in the model should be validated in some way, this could be achieved assessing hemodynamic changes or molecular marker of SS in the area of the constriction (for example, eNOS, PECAM, VE-Cadherin).

Others observation:

- Error bars are lacking in some figures.

- Fig 8 and 9 are mentioned in the discussion but they are not present in the manuscript.

- Statistic analysis in the Figure are not often well reported.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes
Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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