Reviewer's report

Title: Do statins modify the risk of delayed graft function in renal transplantation?

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Comments to the authors:

In this manuscript Reiling J et al examine the association of pre-transplant use of statin by kidney transplant recipients with delayed graft function (DGF). The cohorts (statin and no statin recipients) included living and deceased donor transplants. Authors reported no significant association of statin use with delayed graft function pre-transplant.

The topic is interesting, however in my opinion the manuscript is subjected to some concerns and critics.

Major Compulsory Revisions:

1. In general DGF is expected in deceased donor transplants, while it is an unusual event in living donor transplants. In my opinion, authors should study deceased and living donor as a separate population. Probably, great majority of cases of DGF were in deceased donor. It would be informative to have the percent of DGF in living and deceased donor transplants. Maybe the best approach would be to include in the study only deceased donors. As can be seen in the results (Tables 3 and 4) the most significant factor associated with DGF was by far the donor type.

2. It is important to define more precisely pre transplant therapy. Authors specify that great majority received atorvastatin, however mean dose with SD was not given and doses for the other statins were not even mentioned in the manuscript. Although the negative results, regular doses may not affect outcome, however outcome may be different with higher doses. In my opinion, as the majority of recipients did use atorvastatin this group should be analyzed in separate. Authors could compare results between: no statin vs. atorvastatin, and no statin vs. atorvastatin plus other statins.

3. In results, page 8, I cannot agree with the assertive that ND-DGF and pooled results “tended” to be higher in statin users. P-value was 0.25 and 0.14, respectively, defining no difference.

4. Title should be modified. The study design cannot answer the proposed question “Do statins modify the risk of delayed graft function in renal transplantation?”, but maybe, can define an association. Title should be something as “Association of pre-transplant statin use with delayed graft function in kidney transplant recipients”

5. I lack in the discussion some mention if similar clinical studies exist in the
literature, and if others authors have examined the pleiotropic effect of statins in kidney transplant, even if not directly related with DGF. Also, in my opinion it is important to clarify the dose of statins given to the mice in the mentioned experimental studies and if they are comparable to the doses usually given to treat hypercholesterolemia.

Minor Essential Revisions:
1. In abstract the methodology was not well described. Cohorts should be defined. Mean dose of statin has to be given. Authors have to mention that deceased and living donors were included in the study. Statistical method has to be defined, as well as cofounders used to adjust the association. In result, OR for ND-DGF need to be included, as it is one of the study outcomes. Conclusion should be limited to the first sentence.
2. Page 8, under results a more precise dose of atorvastatin should be report. Please also, add mean dose for the other statins.
3. Please define in results the cofounders used in each multivariate model
4. In the limitation, mention that statin was only given to recipient, and that results may reflect an effect only in the reperfusion mediated kidney injuries.

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

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**
'I declare that I have no competing interests'