Reviewer’s report

Title: The impact of intravenous methylprednisolone pulses on renal survival in anti-neutrophil cytoplasmic antibody associated vasculitis with severe renal injury patients: a retrospective study

Version: 0 Date: 28 May 2017

Reviewer: Julie Belliere

Reviewer's report:

The authors provide data of intravenous methylprednisolone pulses for ANCA-associated vasculitis. The small number of patients and the design of the study cannot confirm utility and safety of this strategy. However it is an interesting work.

Major comments

Methods:

* The inclusion time is very long (2004-2016): did the author study the effect of time inclusion on the results?

* The readers need the following figures: global survival (MP vs control group) and renal survival (or dialysis-free patients) curves with p-value and number of patients at each time of the study. The results are mixed in table 4. Death should be analyzed separately.

Necessary controls:

* The MP group received 500mg/d for 3 days. A major limitation is that it is a fixed dose for patients with very different weight. This could expose to over- or under-exposure to the molecule and may account for difference in later prognosis. Could the author provide patient's weight or body mass indexes and re-analyze prognosis with this parameter?

Conclusions drawn:

* The number of biopsies is too low to assess "there was no differences between MP and control group" (page 6, line 51). A major limitation is the disequilibrium of histological-proven cases in MP group. Could the authors provide the reasons why less biopsies were done in control group? This should be taken into account to limit the global conclusion of the study. Data on kidney biopsy should be removed to supplementary only.
Minor comments

- In the title the word "efficacy" is misleading, since this is not a prospective randomized clinical trial. Furthermore, using "efficacy" is too strong because the only observed benefit is a difference in proportions of patients that are dialysis-independent, not a benefit on global survival. So the title should be changed to reflect the content of the study.

- Abstract: page 2, line 7-8 remove "who would have good responses". Maybe replace by identification of prognostic factors.

- Results: page 2, line 43-44. It is not clinically relevant to use 854.5 and 3.67 as numeric thresholds. These values should be simplified as 855 and 3.7 respectively.

- Page 3, line 47: the percentage of MPA should be cited.

- Page 3, line 47: "were in higher age" should be replaced by "older"

- Page 4, line 52: "other known causes" should be exhaustively detailed, given the fact the diagnosis is not proven on histological data for most of patients.

- Page 6, line 22: Please precise at what time patients were lost to follow-up.

- Page 12, line 12: What was the percentage of patients without diuresis at admission? Using proteinuria is sometimes difficult and this technical limitation should be cited.

- Page 14, line 29. Patients with high serum creatinine and UPCR at admission may not have good responses to IV MP pulses. Could the authors provide tolerance data in this group? Do they mean this population exhibit higher adverse event rates?

- Page 16, line 51, the sentence "furthermore, the patients… tendency" should be removed. P-value 0.056 does not allow any tendency approximation, given the design and size of the study.

- Table 2: the p-value of the comparison of infections between the 2 groups should be indicated.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

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

No

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 recommend additional statistical review

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