Reviewer's report

Title: Intravenous Pulse Methylprednisolone For Induction Of Remission In Severe ANCA Associated Vasculitis: A Multi-Center Retrospective Cohort Study

Version: 0 Date: 12 Jan 2018

Reviewer: Kenei Sada

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This is a retrospective observational study of patients with severe AAV. Authors have examined the effect of intravenous pulse methylprednisolone (MP) on clinical outcomes and found that addition of pulse intravenous MP to standard therapy for remission induction may not confer clinical benefit despite the association with infection and diabetes. There are several comments.

1) The definition of AAV in this study is unclear. How many participants were classified as EGPA, GPA, or MPA?

2) The definition of renal recovery is also unclear. What is a sustained improvement in renal function? If a patient required HD but exhibited a decrease in serum Cr levels, these patients achieved renal recovery? Please define precisely.

3) Please show the table when adding the dose of MP delivered in multivariable proportional hazards models to detect the predictors of infection.

4) Authors described that this study aimed to examine the effect of MP pulse; therefore, MP pulse should be included in the multivariable analysis in addition to infection by 3 months.

5) Regarding new-onset diabetes, how were the results of multivariable analysis? Previous reports have shown several risk factors, so several confounders may affect the result of this study.

6) Authors should describe methods and results about analysis using the propensity score. The patient backgrounds were quite different between the two groups. Especially pulmonary hemorrhage was a critical factor related to survival and severe infection. Authors should perform the analysis using the propensity score matching.

7) Did the MP pulse affect chronic damage such as VDI?

8) A recently published article in BMC Nephrology [1] has demonstrated that intravenous MP pulses had been able to improve the long-term outcome in term of dialysis independence and
tend to decrease mortality for Chinese AAV patients with severe renal involvement. Moreover, the results of adverse events have been also different from those of this study. Authors should discuss that what differences between those two studies have led such quite different conclusions.


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 am able to assess the statistics

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