Reviewer’s report

Title: Impact of 6% balanced hydroxyethyl starch following cardiopulmonary bypass on renal function: A retrospective study

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Reviewer: Jason Ali

Reviewer's report:

Thanks for the opportunity to review this paper on the topic of 6% HES on renal function. My comments follow:

-I would suggest asking a native English speaker to review the manuscript as there are a lot of grammatical issues throughout the manuscript.

Introduction
-I wonder if you should include some brief detail as to the presumed mechanism by which the HES is causative of AKI

Methods
-In postoperative fluid management line 131 - you say HES was used according to renal function and coagulation status - what is meant by that?

-I am not clear on the exact methodology used here. Am I right in thinking that you have divided the patients depending on how much they received retrospectively? If so, then surely it is impossible to make any conclusion on the impact of HES on AKI. Surely, the major limiting factor here is then why did they need more fluid and is THAT not the reason for the AKI rather than the actual fluid? Surely a better control would be to have patients receiving similar amount of fluid overall but with different proportions of that fluid being HES. As I read it we have 2 groups that essentially have required different volumes of fluid and so in truth are quite different patients to be comparing.

-I am not an expert on statistical technique and cannot comment on the methodology used.

Results
-I would suggest presenting the median (IQR) as these are a more representative of the distribution. There are some values that have essentially identical mean but are highly significantly different and I think the median values would be better.

-In table 2 you present fluid and blood transfusion etc - over what time frame?

-In keeping with my point above in the methods - the patients are different - those receiving more HES have significantly prolonged CPB and ACC times indicating that they had more complex
procedures, and the greater exposure to CPB etc can explain the increased AKI incidence could it not?

-Table 3 - what is meant by early and late mortality? Is this 30-day and 1 year? - specify what it is.

Conclusion
-I do not believe that the methodology used here is sufficient to conclude that there is a link between volume of HES and development of renal injury.

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