Author’s response to reviews

Title: Pleth Variability Index versus Pulse Pressure Variation for Intraoperative Goal-Directed Fluid Therapy in Patients Undergoing Low-to-Moderate Risk Abdominal Surgery: a Randomized Controlled Trial

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Author’s response to reviews:

Thank you to give me the opportunity to review this interesting manuscript.

Statistical analysis seems to be very serious and this manuscript needs to be published to add data about association between non-invasive hemodynamic monitoring and postoperative complications.

However, my main concern is that complications are so rare that the question of hemodynamic monitoring is raised. Globally, I would introduce and emphasize (abstract, discussion, conclusion) the fact that optimizing such healthy patients with such low to intermediate surgeries may be questioned. Finally, the main point of this manuscript is that using an invasive monitoring outweighs the potential benefits in these settings.

I have added some comments in the pdf file, please read it carefully as well.

Abstract:

Is GDT valuable for low-to-moderate risk surgery? If so, I would precise it in the short introduction of the abstract
LOS is similar in both groups, but depends a lot about the institution organization, unless if I understood in the material section that real discharge timing was not the one collected (L19 P7)?

Can you precise this?

Can you precise what kind of complications you collected?

Introduction:

Please check the references, a lot of references are not appropriate (see PDF file)

Justify the choice of having 3 objectives : one could be the primary objective and the others the secondary objectives, as you wrote it in the materiel and methods section.

Materiel and Methods

The population described is at low risk,

The last of a dynamic indice was > 5 min to start a FL: can you precise your management in case of an acute bleeding?

The LOS is based on the decision of the surgeon to let the patient go back home, are there any data between the real last of hospital discharge and the one you calculated?

L1 p7: In cases of repeated boluses, can you precise the management: how long did you wait at the end of the first FL to repeat the FL, 5 min?

L7 P17:

The primary outcome is well explained, I would rewrite it in the abstract.

The characteristics of the postoperative complications are not explained, could you please describe these one?

Discussion:

L10 p14: I would overall emphasize that PPV with the arterial line is invasive and does not improve outcome versus the non-invasive PVI.

Justify the monitoring of low to intermediate risk surgeries (maybe with the interaction with the risk of the patient?) with finally low risky patients, you could add a limitation in précising that a restrictive strategy is as good a as GDT in this context. These hypothesis is inforced by the weak
numbers of colloid Fluid loading (table 2). The reference L19 p11 is not an explanation of why monitoring such patients.

Conclusion:

I would mitigate the results in precising the setting (low risk patients with low to intermediate risk surgery). Invasive monitoring is definitely not appropriate, but non invasive monitoring is still debatable face to a restrictive strategy.

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.

Yes

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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