Reviewer’s report

Title: Observations on significant hemodynamic changes caused by high concentration of epidurally administered ropivacaine: Correlation and prediction study of stroke volume variation and central venous pressure in thoracic epidural anesthesia

Version: 0 Date: 25 May 2017

Reviewer: Ayse Baysal

Reviewer’s report:

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Reviewer Comments to authors:

1- Abstract section:
Line 8 to 13: The cardiovascular depression that is observed during anesthesia may be due to general anesthesia or general as well as epidural analgesia. So this sentence needs to be revised or expressed in another way. What is the reason that you observe more cardiac depression due to epidural use please insert a general information regarding this physiologic change if you want to Express cardiac depression. Cardiac depression is not a well known specific expression regarding cardiovascular effects of epidural analgesia, so please follow text book guidelines.

Line 13 - 15: Is this sentence may describe your concerns more clearly? "Clinical studies on hemodynamic effects of epidural local analgesic related dose titration leading to different cardiovascular responses including myocardial depression and vasodilation has not been well studied."

Line 16 to 18: What do you mean by static and dynamic hemodynamic parameters this is not well understood. I think talk simply and state what your hypothesis is and what you are looking for instead of these general sentences.

Your aim is during dose titration of ropivacaine local anesthetic a static and dynamic please explain evaluation of hemodynamical data is evaluated by the use of stroke volume variation (SVV) and central venous pressure (CVP) during TEA.

Line 38: SVV and CVP……should be corrected as:

SVV, CVP and measurement of mean arterial pressure following epidural loading with a 20% decrease
Conclusions: It is not well written,

What are your findings for each given dose is actually more important in my opinion. Because the two first concentrations and doses of ropivacaine are more commonly used as a bolus dose. Epidural ropivacaine infusion has more effects on hemodynamics instead of bolus doses. If you can provide that data and show their effects on SVV, that should be published because there is little data on effects of epidural ropivacaine on SVV. High dose effects on hemodynamics is not something that is not shown before so this should not be your conclusion. CVP is not informative, this can be stated in a separate sentence. What do you mean by improvement of accuracy is not also clear. I think this can not be a conclusion in your study. You are not evaluating accuracy. You are using only epidural bolus doses and looking for differences in hemodynamics by the use of CVP and SVV. Than you should state this for goal and find a result in this line and present in conclusion and findings.

High dose of epidural ropivacaine caused bigger change of hemodynamic parameters due to the change of SVR. SVV could be more informative than CVP, however, improvement of accuracy needed for detection of hemodynamic changes in TEA.

I should state that the whole text needs to be revised according to the abstract.

Your goal is to investigate a correlation between 20% decrease in MAP and epidural loading dose of ropivacaine, than your result and conclusion needs to state these. Make a hypothesis first and investigate your hypothesis. How do you get the conclusion that an improvement of accuracy is needed for detection of hemodynamic changes? From your results. Please explain.

Because of some major mistakes in abstract and methods including expression of your hypothesis to the reader, it is my point of view that you should rewrite the manuscript before sending for reevaluation. Thank you.

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

**Quality of written English**
Please indicate the quality of language in the manuscript:

Not suitable for publication unless extensively edited

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Please complete a declaration of competing interests, considering the following questions:

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