Reviewer’s report

Title: Comparison of ropivacaine combined with sufentanil for epidural anesthesia and spinal-epidural anesthesia in labor analgesia

Version: 2 Date: 05 Aug 2019

Reviewer: Reviewer 2

Reviewer's report:

"PEER REVIEWER ASSESSMENTS:

OBJECTIVE - Full research articles: is there a clear objective that addresses a testable research question(s) (brief or other article types: is there a clear objective)?
Yes - there is a clear objective

DESIGN - Is the current approach (including controls and analysis protocols) appropriate for the objective?
No - there are minor issues

EXECUTION - Are the experiments and analyses performed with technical rigor to allow confidence in the results?
Yes - experiments and analyses were performed appropriately

STATISTICS - Is the use of statistics in the manuscript appropriate?
No - there are issues with the statistics in the study

INTERPRETATION - Is the current interpretation/discussion of the results reasonable and not overstated?
Yes - the author's interpretation is reasonable

OVERALL MANUSCRIPT POTENTIAL - Is the current version of this work technically sound? If not, can revisions be made to make the work technically sound?
Probably - with minor revisions

PEER REVIEWER COMMENTS:

GENERAL COMMENTS: The authors have clearly mentioned the objectives, executed and interpreted their findings but have not clearly mentioned the study design. They have compared two modalities of ropivacaine combined with sufentanil for continuous epidural anesthesia (CEA) and combined spinal-epidural anesthesia (CSEA) in labor analgesia in terms of onset time and labor period, analgesic effect, adverse drug reactions rates and subject satisfaction perspectives and found that the CSEA modality would be superior to the CEA modality. This might be guidance for the gynecologists and obstetricians
during their clinical practice but with necessary verification due to various limitations of the study including retrospective study, single-centric study, small sample size and other.

The authors have analyzed their data applying Student's t test, χ² test and repeated measure ANOVA and interpreted the findings in tabular forms to make the findings trustworthy. They have clearly interpreted other findings with descriptive statistics (mean±SD) as well.

The authors have not specifically mentioned the conditions for the applications of the various statistical tests. They have also not mentioned the statement about normality checking of their dataset with P-P plot or Q-Q plot to confirm that the application of Student's t test and repeated measure ANOVA tests. If data were not normally distributed, you would have to apply Friedman's test (not repeated measure ANOVA) and Mann-Whitney U test (not independent t test). Other comments have been provided with this peer review.

ADDITIONAL REQUESTS/SUGGESTIONS:
General comments:
Use past tense in Methods and limitations sections.

Specific comments:
Methods:
Mention study design specifically; from the statement it seems that it was case-control study. Clarify this.
Mention the basis of sample size calculation in both continuous epidural anesthesia (CEA) and combined spinal-epidural anesthesia (CSEA) groups. If this was case-control study, control: case ratio should be either 1:1 or 2:1 or 3:1 or 4:1. Clarify the issue.

Study population:
You've mentioned "All subjects were American Society of Anesthesiologists (ASA) … CEA group were class I." Sample size seems contradictory to that mentioned in the first sentence of this section i.e., "A total of 360 cases of voluntary … selected in this study retrospectively" and also contradictory to those mentioned in tables 1-7. Clarify the concern.

Statistical Analysis:
Specify the exact conditions for the applications of those statistical tests mentioned in the sentence "Quantitative variables were compared by Student's t test and χ² test was used for categorical variables."
You've mentioned "Repeated-measures analysis of variance were used for the comparison of different time points within the group." Did you check normality distribution of data with P-P plot or Q-Q plot? If so, mention those statements. If data were not normally distributed, you would have to apply Friedman's test. Clarify the issue.

Discussion:
You've mentioned "The limitation of this study is that … epidural anesthesia were not suitable for this method." If you collected data retrospectively, your role was just to retrieve data from the file or repository or database. So, justify how technical expertise was required for this purpose if this was not prospective study?
References:
References 1-8, 11, 13-24: Either mention 'doi' before digital object identifiers or skip these when you've mentioned year of publication, volume and/or issue and page number to save the space of the journal.

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.

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:

Acceptable
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3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

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If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

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