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Title: Maternal Preeclampsia Hemodynamic Characteristics During Cesarean Delivery After Spinal Anesthesia with Ropivacaine

Reviewer's code: 00742373

Position: Editorial Board

SPECIFIC COMMENTS TO AUTHORS

The manuscript "Maternal Preeclampsia Hemodynamic Characteristics During Cesarean Delivery After Spinal Anesthesia with Ropivacaine" studied the hemodynamic changes under anesthesia with ropivacaine during cesarean delivery. The authors enrolled 10 preeclampsia women in the study. The Cardiac output (CO) and stroke volume (SV), mean arterial pressure (MAP) and systemic vascular resistance (SVR) and Central venous pressure were observed before, during, and after cesarean delivery. In addition, it also observed oxytocin administration to the influence of hemodynamics and maternal and neonatal complications. They concluded that spinal anesthesia for caesarian delivery with ropivacaine in women with preeclampsia was linked to modest hemodynamic changes of no clinical significance in this study. The authors also recommend careful cardiovascular monitoring particularly after the delivery of fetus and the use of oxytocin. There were dozens of studies on the hemodynamics of ropivacaine to cesarean delivery from documents review, but few of them were on preeclampsia. Preeclampsia is a common and specific complication associated with pregnancy. It has specific hemodynamic changes with poor maternal outcomes. Cesarean delivery is the most frequently adopted delivery to terminate pregnancy for women with preeclampsia. And spinal anesthesia is a preferred anesthesia for women with preeclampsia. This manuscript targeted very well on this special pregnancy induced complication. It provided clear data and conclusion for the use of ropivacaine for spinal anesthesia during cesarean delivery for preeclampsia. The study was a prospective, observational



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study carried out at academic teaching hospital. The design is logical and scientific, the data are believable, the discussion is focusing with depth. It provided clear outline of the influence of the spinal anesthesia with ropivacaine to the hemodynamics during cesarean delivery of preeclampsia women. Comments for improvements: 1. It is OK for primary report of the study, but reviewer encourage to increase the sample size. 2.

Suggest to add groups for the comparison, such as groups of women without preeclampsia, anesthesia with other medications. 3. This manuscript might be more appropriate to publish in the World Journal of Obstetrics and Gynecology.

Reviewer's comments #1&2: 1. It is OK for primary report of the study, but reviewer encourages to increase the sample size. 2. Suggest to add groups for the comparison, such as groups of women without preeclampsia, anesthesia with other medications.

Our answers to comments #1&2:

The reviewer encourages us to increase the sample size or add healthy normotensive pregnant women as a control group to our study. We appreciate these comments and think they are good suggestions. Adding a control group of normal pregnant women would make our clinical trial data more comparable, which can better and further reveal the unique hemodynamic characteristics of preeclamptic women when undergoing cesarean delivery. Our study adopted a moderately invasive hemodynamic monitoring technique (central line with Flotrac/Vigileo™ monitoring) to observe the perioperative hemodynamic changes of the parturients, which is not a routine monitoring strategy used for healthy pregnant women during cesarean deliveries. We feel having patients consent to such an invasive protocol as well as receiving approval from our ethics review panel would be difficult. Perhaps a less-invasive method could be adopted for both groups in a future follow-up trial.

Although our study included 10 cases of pre-eclamptic women as subjects, the research process was rigorous and we believe the data is still informative and reliable. The perioperative hemodynamic changes of women with preeclampsia induced by ropivacaine are apparent and important to share with the larger medical community. According to our literature search, there are no similar published reports at present, so



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we think that although the current sample size is small, our article is scientific and adds to the literature.

Reviewer's comment #3: This manuscript might be more appropriate to publish in the World Journal of Obstetrics and Gynecology.

Our answers to comments #3: Thank you for the recommendation. When we have suitable articles in the future, we may try the World Journal of Obstetrics and Gynecology.

We would like to thank our editors and reviewer for their suggestions and revisions for our article. We will revise the manuscript once more in accordance with these suggestions and re-upload the revised manuscript.

And we list the changes as follows, and highlight them in yellow for easy editing and review. Thanks.

- Page 1:
 - We modified the 'running title' to make it clearer;
 - Add the middle name into 'Joseph Walline' as 'Joshph Harold Walline';
 - Modified the 'Emergency Department' as 'Department of Emergency Medicine'.
- Page 8
 - We deleted this sentence 'The primary outcom in this study is the intraoperative hemodynamic stability and CO changes induced by ropivacaine', which located in front of the 'Study protocol' section in the previous manuscrpit, because our study is an obserbational study and nothing is being done to the patients. So after discussion, we think there no need to be a primary outcome here.
- Page 27
 - We modified the caption of table 1 to make it clearer.
- Page 32 &33
 - We modified the legends of figure 1&2 to make them simple and clearer.
- Page 18-20



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We added the 'Highlights' section according to the editor's comments.

- Dr. Walline, a native English speaker, one of our co-author, has read the whole manuscript and edited the language again; he modified some subtleties, such as punctuation, dosage units, and some expressions, to make our article more concise and clear. Because these changes did not affect the original meaning, so they are not listed here one by one.