Author's response to reviews

Title: Influence of the timing of administration of crystalloid on maternal hypotension during spinal anesthesia for cesarean delivery: preload versus coload

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Author's response to reviews: see over
Dear Editor,

Thank you for giving us a chance to revise the manuscript entitled “Influence of the timing of administration of crystalloid on maternal hypotension during spinal anesthesia for cesarean delivery: preload versus coload”. We revised our manuscript as pointed out by referees and enclosing here the point-by-point answers to the concerns.

Best Regards,

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Reviewer’s report

Major compulsory revisions,

Introduction:
1-Author's hypothesis is unclear. They could write which more descriptive their hypothesis.
⇒ We modified our hypothesis to be more descriptive at Introduction(page 4, the last paragraph).

2-They must give some information about physiologic changes when preload or coload for timing of fluid administration .
⇒ We detailed the description by adding “Crystalloids do not remain in intravascular space but distribute rapidly into the extracellular fluid~~” to the Introduction(page 3, the last paragraph).

Methods:
1-Why did authors chose Hartman's solution? Which type electrolyte do have Hartman's solution, osmolarite? They will give some information.
⇒ We added the information about the composition of electrolyte and osmolarity of the Hartmann’s solution at Method(page 5, 2nd paragraph).

2-They will give to us, patients ASA status.
⇒ Only ASA I patients were included in our study and this is inserted at Methods (page 5, 1st paragraph).

3-Did they measure diastolic and mean arterial pressure?
⇒ We measured diastolic and mean arterial pressure. We added mean blood pressure at Table 2
4-Did they use urine catheter?
⇒ Urinary catheter was inserted for all patients and this is inserted at Methods(page 5, 3rd paragraph)

5-Did they use any sedation for patients? If yes, which drug did they chose? Why?
⇒ Sedation was not done for any patient and this is added at Methods(page 6, 1st paragraph).

Results:
1-Did author have SpO2 data? SpO2 is related to perfusion.
⇒ We measured SpO2 and they were all within normal value. We added the fact that we measured SpO2 at Methods(page 5, the last paragraph).

2-Did authors have any heart rate data?
⇒ We added heart rate at Table 2.

3-Duration of spinal anesthesia is short? Why? How can they explain?
⇒ "Duration of anesthesia" in Table 1 is not a duration of spinal block but a duration of anesthesia, that is, from the start to the end of intraoperative patient monitoring. We changed the expression to "anesthesia time" to avoid confusion.

Discussion:
1-Authors subject is timing of the fluid flood. They did not have which fluid type of the loading. Authors will not add crystalloid vs colloid literatures in their discussion section.
⇒ About the timing of the fluid loading in patients undergoing Cesarean section, the majority of previous reports were with colloids. We wanted to tell that these are not applicable to crystalloids

3-Did authors observe any complication headache, urine retention, vomit?
⇒ No patient vomited and we added this to Table 2. However, we did not measure postoperative outcomes, such as headache or urinary retention.

4-I think, T3 level is very high dermatome. Did they observe respiratory failure any patient?
⇒ During Cesarean section, a mid- or high-thoracic level of block is required because the traction on the peritoneum and uterine exteriorization frequently cause discomfort during surgery(Obstetric Anesthesia Principles and Practice, 3rd ed., Elsevier Mosby, p 430). No patient showed respiratory failure and we added this at Results(page 7, 2nd paragraph).

5-I think, authors will explain physiology for preload or coload in the discussion section. Because why will we chose coload?
⇒ We recommend to choose coload instead of preload because our data clearly show the lower incidence of hypotension and need for vasopressor in coload group compared to preload group. This is already in Discussion(page 9, 2nd paragraph). Crystalloids are not confined to intravascular space but rapidly distribute into the extracellular space, so infusing crystalloids at the time of vasodilation are more effective than prophylactic infusion in reducing the hypotension resulting from vasodilation induced by spinal anesthesia. We added this to Discussion(page 9, 2nd paragraph).
Conclusion section will be rewritten by authors.

⇒ We modified the conclusion to be more clear at Discussion (page 10, the last paragraph).