Peer review report

Peer review report 1 on “The effect of 0.9% saline versus plasmalyte on coagulation in patients undergoing lumbar spinal surgery: A randomized controlled trial”

1. Original submission

1.1. Recommendation

Major Revision.

1.2. Comments to the author

1. This sentence in the introduction is very confusing. “However, the electrolyte composition of 0.9% saline is less physiologic compared with balanced salt solutions such as lactated Ringer’s solution comprising of sodium and chloride at 154 mmol/l each”. Although an educated reader recognized that 154 mmol/l is the ion concentration of 0.9% saline, the sentence structure makes it unclear if 154 refers to 0.9% NaCl or LR. Please clarify.

2. A significant omission of this study is a detailed analysis and commentary of ROTEM result within group. The effects of crystalloids are not benign, and this data affirms that. Others have reported on this effect, and its importance should not be diminished.

3. Early in the discussion, the authors propose that “the disturbance in acid-base balance observed in the 0.9% saline group was not associated with any specific coagulatory dysfunction as assessed by ROTEM analysis, except that from hemodilution”. The authors give no evidence to support the conclusion of hemodilution. There are no measures of postoperative hemoglobin reported, or total volume balance (including insensible losses). This conclusion is not supported and should be substantiated or removed from the manuscript.

4. In this same vein, the authors propose that the ROTEM abnormalities with groups are a result of “hemodilution”, however (again) no evidence is given or references cited to prove this. Please address this.

Anonymous reviewer.

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