LETTER TO EDITOR

In Response to "Balanced Salt Solution for Metabolic Acidosis in ICU"

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To the Editor,

We thank the authors for their interest in our original article titled, "Comparison of commercially available balanced salt solution and Ringer's lactate on the extent of correction of metabolic acidosis in critically ill patients". We submit point by point response to the queries raised.

1. It is difficult to agree with the claim that most of the studies to date have shown comparable acidosis correction using either Ringer's lactate (RL) or acetate solution (AC) solution. The studies comparing RL and AC have demonstrated a more negative base excess in patients receiving RL as compared to a commercially available balanced salt solution, like plasmalyte or AC.[1] In another study, the authors have mentioned that plasmalyte does not cause accumulation of unmeasured anions and causes a greater increase in standard base excess than RL.[2] They further suggested avoiding RL where base deficit needs to be monitored owing to high lactate content. As previous literature suggests, AC is superior to RL, we assumed the correction of metabolic acidosis by AC in 20% lesser time.
2. The calculated sample size was 11 per group. However, to assume 100% of patients will have the correction of metabolic acidosis in the first two hours would be unrealistic. So, we doubled the number of patients in each group, that is, 22. To account for potential dropout or any mortality before completion of the study period, we recruited a total of 50 patients.
3. The time of the study, that is, two hours has already been mentioned as a limitation of our study.[3] The patients were recruited in this randomized trial after confirming metabolic acidosis from first arterial blood gas (ABG) analysis soon after admission to ICU. All previous factors and differences, if any, are taken care of by randomization at the beginning of the study period.[4]
4. The patients were resuscitated as per the sepsis guidelines and the mean arterial pressure (MAP) of 65 mm Hg was targeted. Due to the limit in the number of tables and graphs, graphs with hemodynamic parameters could not be included.
5. Vasopressors/inotropes used to maintain an MAP of 65 mm Hg and antibiotic administration in the first hour are essential components of resuscitation of a patient in sepsis. In this randomized controlled trial, the only difference between the two groups was the fluid administered. All patients were treated according to the guidelines in all other respects.

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