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Hypernatremic alkalosis or chloride depletion alkalosis? Reply to Vasconcelos et al.

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Dear Editor,

We would like to thank Vasconcelos and colleagues for their interesting remarks and their data presented. These authors conclude that the term “chloride depletion alkalosis” should be used instead for hypernatremic alkalosis, as was suggested in our article [1]. However, as the authors mentioned, our collective of medical critically ill patients is most definitely not comparable to the patient presenting to the emergency department. We know from previous studies that the etiology and prognosis vary between patients who acquired hypernatremia in the ICU/hospital or in an ambulatory setting [2, 3].

In our study, we saw that patients, while developing hypernatremia during their ICU stay, experienced a rise in serum chloride. However, the increase in chloride concentration was significantly exceeded by the rise in serum sodium. This was accompanied by the development of metabolic alkalosis and a rising base excess sodium. Taken together, we do believe that a metabolic alkalosis, which is mostly attributable to a rising serum sodium as expressed by base excess sodium, should be termed hypernatremic alkalosis. This term has been used before by others to describe the alkalosis accompanying hypernatremia [4]. However, we agree that the pathophysiology of the observed alkalosis is probably multifactorial and that therefore the predominant mechanism should be assessed in the individual patients.

Conflicts of interest None.

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