Authors' reply

Sir,

The authors have raised some queries[1] on our submission.[2] We agree with the statement, "two samples that are processed in different times can have different

laboratory data". In our paper, we have stated that paired samples were collected at the *same time* from each patient. Thus, time difference in assay was small and unlikely to contribute to the differences observed.

As pointed out, data on quality control and reference ranges of the two systems are important. The % co-efficient of variation for both analyzers has been described in detail in the Section "Materials and Methods". Since the two analyzers use different samples (whole blood vs. serum), it was not possible to use the same quality control materials for both the analyzers, particularly as the manufacturer often compensates the material specifically for the conditions of their analyzer.

As regards the reference range, no specific reference range was used for whole blood samples. However, following this study, a lower range probably needs to be defined for whole blood samples, given that the whole blood potassium was lower by 0.3 mEq/L and sodium was lower by 4.0 mEq/L. As correctly pointed in the letter, our study determined a correction factor between arterial whole blood and serum and not between arterial whole blood samples (that is commonly analyzed at point of care) and venous serum samples (that are usually sent to the central laboratory). Thus, as stated in our paper, each center needs to do its own study to determine the correction factor that needs to be applied for the different types of samples that are sent for testing.

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