We have extended the existing method of ionic dialysance measurement in the diffusive regime to the highly convective online hemodiafiltration regimen by developing a method that is applicable to various modes of substitution (post-, pre-, and mixed dilution). In contrast to other theoretical methods, all required quantities can be measured to a high precision without the knowledge of blood and dialyzer properties. In our *in vivo* study, we have validated our approach by taking the blood-side urea clearance as a reference. We did not intend to do a systematic analysis of the dependence of the dialysance on the dialysis conditions.

In their *in vitro* experiment, Ficheux *et al.*[2,3] evaluated the impact of increasing ultrafiltration flow and varying site of substitution on total ionic clearance. They nicely illustrated that ionic dialysance is linearly correlated with ultrafiltration flow. In contrast to our study, they did not provide a technically feasible method to measure ionic dialysance *in vivo* as their model either requires the measurement of blood-side conductivity or the *a priori* knowledge of the dialysance without online substitution.

In our study, 26 measurements have been omitted due to errors in the sampling or processing of the corresponding blood reference samples. During our experimental study, size and shape of the transient conductivity change were varied to determine their optimal values. From the statistical analysis of the measurement, error threshold values for these parameters were fixed. In 22 cases, the conductivity change was suboptimal and the corresponding measurements were excluded from the final analysis. No individual measurements were excluded *a posteriori* as statistical outliers.

We conclude that in contrast to what the authors of this letter claim, our modeling approach is quite original. It allows the determination of the ionic dialysis in online hemodiafiltration treatments by measurements on the dialysate side alone. This approach provides a safe and reliable tool to evaluate routinely in clinic the dialysis dose delivered by online HDF.

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Thiazide diuretics: rat versus human

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To the Editor: I read with interest the study by Reungjui *et al.*[1,2] and the accompanied editorial published in the same issue of *Kidney International*. The study by Reungjui *et al.* included 20–24 rats divided into four groups, with two of them being subjected to thiazide diuretics. The authors convincingly show that low kidney function and glomerular and tubular injury manifest more commonly in thiazide-treated rats, an effect that cannot be explained by hypokalemia alone. Various credible explanations were also provided and are all well taken. However, in the conclusion section as well as in the editorial that accompanied this article, the authors make a connection between the pathological findings in rats and the results of various clinical hypertensive studies done in humans. Although I do not disagree or agree with the authors' interpretations and arguments regarding the design and outcome of these cited clinical trials, I find it very puzzling to make a link between pathological findings in rats taking thiazide diuretics and clinical studies that used thiazides in humans. Current knowledge indicates that rat kidneys differ not only from humans but there is also intraspecies variability.[3,4] A few other questions come to mind. Assuming that the rats actually drank all the thiazide-loaded water and accordingly received 1.5–1.75 mg thiazide/day, how does this dose translate to clinical practice or to the dose used in the ALLHAT or AASK trials? What is the equivalent of 20 weeks of rat age in human life? Can the same findings be reproduced if another rat species was used?

Basic science research continues to be the best tool to build breakthrough clinical research, but until studies dedicated to examine the effect of chronic thiazide use on histological findings and/or kidney function in humans become available, I think extrapolating from animal studies risks unwarranted changes in clinical practices and public confusion.

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