Reviewer's report

Title: Differential effects of phosphate binders on pre-dialysis serum bicarbonate in end-stage kidney disease patients on maintenance haemodialysis

Version: 3 Date: 18 February 2013

Reviewer: Alastair Hutchison

Reviewer's report:

The authors have addressed my comments adequately, although a number of minor typographical errors remain. However, the covering letter also deals with the question of oral or dialysis fluid supplementation of bicarbonate.

This introduces another layer of complexity. Is there any evidence that all patients had supplementary bicarbonate if venous levels fell below 18mmol/L? Was application of this policy uniform and unbiased? In an observational study this seems unlikely.

Can the authors tell us how many patients had oral supplements versus dialysis fluid supplementation versus no supplements, and what was the breakdown by type of phosphate binder?

If the patient changed binder, was the venous bicarbonate supplementation reviewed? Were there criteria for stopping the supplement at a certain level of venous bicarbonate?

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

Past advisor and recipient of research grants from Shire Pharmaceuticals.