Reviewer's report

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

Version: 2 Date: 21 November 2012

Reviewer: Alastair Hutchison

Reviewer's report:

This is an interesting observational study, but does not add significantly to the existing literature. In essence the study demonstrates that renagel causes acidosis and the other binders do not. This is well reported in the literature.

Major Revisions and Comments

1) The stated aim of the study was "to investigate the effects of phosphate binders on pre-dialysis serum bicarbonate in ESKD patients on maintenance haemodialysis". However, there is no control group to inform the reader whether 'other' binders have a positive, negative or neutral effect on serum bicarbonate - we cannot tell. All one can say is that renagel is different from the rest.

2) In my own unit it is standard practice to prescribe oral sodium bicarbonate to all patients whose venous bicarbonate is below target - were none of the study patients taking sodium bicarbonate? If not, I am surprised that they were able to achieve the bicarbonate levels reported.

Minor revisions

3) The authors mention concern about long-term effects of lanthanum but then references a paper which studied it for 6 years without any adverse effects - this comment seems inappropriate.

4) There are a few typographical errors in the references which need correcting - for example references 1, 5, 8, 9, 10, 13 etc. Some of these may be special character errors by the computer.

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:

Yes. I have worked as a consultant to Shire Pharmaceuticals and received honoraria within the past 5 years.