Reviewer’s report

Title: High Serum Bicarbonate Level within the Normal Range Prevents the Progression of Chronic Kidney Disease in Elderly Chronic Kidney Disease Patients

Version: 1  Date: 22 August 2012

Reviewer: Sankar D Navaneethan

Reviewer’s report:

Dr. Kanda et al report the results of a secondary analysis in which they studied the associations between serum bicarbonate levels and renal outcomes in those with kidney disease.

Major compulsory revisions:

1. The exact aim of the study is unclear. If the objective was to study the associations between low serum bicarbonate and renal outcomes, this has been studied previously and well established. In fact, authors have appropriately referenced these studies (both observational studies and RCTs).

2. Authors have mentioned that they conducted propensity analysis but they did not provide additional details relating to this. For example, did they use matching technique? How did the standardized difference plot differ before and after matching? What was the propensity score and what was the C-statistic of the model? It would be better to provide complete details of the propensity analyses and elaborate on this.

3. Serum bicarbonate changes over time. It would be better to consider time dependent models.

4. Were patients followed-up even after they were started on dialysis or were they censored. Please clarify as the methods section state that patients were censored at the end of follow-up.

4. Table 1 - Please consider including only those with low-bicarbonate and those with normal bicarbonate group.

Minor revision:

5. Quality of the figures could be improved.

Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published
Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests: I declare that I have no competing interests