Reviewer's report

Title: 25-Hydroxyvitamin D level is Inversely Associated with Serum MMP-9 in a cross-sectional study of African American ESRD Patients

Version: 3 Date: 14 March 2011
Reviewer: Barbara J J Boucher

Reviewer's report:

Review of revised MS: 4081331394376753. March 15th 2011-03-14

Most changes requested by the three reviewers appear to have been addressed satisfactorily. However, the following points still need attention:

Page 6, Study population. Line 9, I think you mean ‘because they provide inflammatory or anti-inflammatory therapy...?’

Page 11. Lines 3-4, does the lack of association of markers with serum 25(OH)D persist after adjustment for the subject being on treatment with calcitriol or other hormonally active vitamin D analogues? The same question applies to the other associations reported in the 3rd paragraph on this page.

Discussion. Page 12. 2nd line of last paragraph needs a semi colon after ‘vascular remodelling’ to make it clear that ref 20 is being referred to. Without this change one would think that there was a reference missing here.

Page 13, line 5, should read ‘Whilst we identified associations between both MMP9 and IL-10 with 25(OH) ...etc’. The sentence after ref [4, 14, 18] is unclear. This might read ‘we did not observe rises in MMP-9 or CRP concentrations as large as those reported previously in comparable patients [25]. In the sentence beginning ‘Finally, while MMP-2 .... models of vitamin D deficiency [13,26],’ is unclear. This might be changed to ‘....while MMP-2 concentrations tended to be higher with 25(OH)D concentrations <15 ng/ml though this did not reach significance, likely due to the small sample size.

Page 14, where ref [9] is given, I think this should be [9-11]; is that right?

Page 15. Para 2, line 2, insert ‘small’ before ‘sample size’. Change ‘who lacked known’ to ‘ patients free of infection or inflammation. Conclusions, If you insert ‘ a new finding of between ‘reveal’ and ‘a significant’ you can then delete the sentence - ‘This study is the first known report...... in an ESRD population’. Last sentence [extending onto page 16]. I don’t think the authors have in fact ‘elucidated’ this mechanism. The last sentence might be more accurate if they say ‘Our findings extend data obtained from previous studies in linking low vitamin 25(OH)D concentrations to increases in the cardiovascular risk marker, circulating MMP-9 concentration, in ESRD’.

Page 16. Top few lines. I think you are talking here about treatment with cholecalciferol here; please clarify as this reads oddly now that we have been told that many subjects were being treated with activated vitamin D. Please
clarify.

Table 1. Change ‘level’ to ‘concentration’ for 25(OH)D or just omit this as you do not use this term for any other measurements in this Table?

Legend to Figure 2. Remove the ‘s’ from the word ‘groups’.

**Level of interest:** An article of importance in its field

**Quality of written English:** Needs some language corrections before being published

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

**Declaration of competing interests:**

I declare that I have no conflicting interests