Reduced cardiovascular mortality in oral 1α-hydroxy vitamin D3 users in a haemodialysis population; do CRP and MMP markers of inflammation reflect this finding?

Sir,

I found the paper ‘Lower risk for cardiovascular mortality in oral 1α-hydroxy vitamin D3 users in a haemodialysis population’ of great interest [1]. We have found a reduction in levels of the inflammatory risk markers for cardiovascular disease, sCRP, MMP2 and most especially of MMP9, in apparently healthy Bangladeshi subjects, with higher vitamin D status and also following supplementation of vitamin D-deficient subjects over a year. In addition, raised MMP9 was a better marker of risk for clinically evident cardiovascular disease than sCRP in our study group [2]. The question that arises, therefore, is whether circulating MMP9, MMP2 or sCRP levels might be available on your study subjects and, if so, whether they may prove to be reduced in users of 1α-hydroxy vitamin D3?

Conflict of interest statement. None declared.

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Reply

Sir,

We appreciate Boucher’s interest in our recent study [1]. I did not know about their intriguing report [2] regarding the anti-inflammatory effects of vitamin D in a non-renal population in vivo. Their data are in agreement with previous reports, that immune cells express vitamin D receptors (VDRs). This may provide another explanation for our finding that the use of alfacalcidol was significantly associated with a reduced risk for death from cardiovascular disease in which inflammation plays an important role. Unfortunately, we are unable to examine a possible relationship between the use of vitamin D and circulating levels of MMP9, MMP2 or hsCRP since we did not store serum samples of this patient cohort. However, the hypothesis is very attractive and highly possible, that vitamin D deficiency may be one of the factors causally involved in the atherosclerosis of subjects with and without chronic kidney disease.

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