Reviewer's report

Title: The role of abdominal aortic calcification in predicting mortality in hemodialysis patients: a retrospective observational study

Version: 2 Date: 15 April 2013

Reviewer: Teresa Adragao

Reviewer's report:

This study presents a detailed look on the association of vascular calcifications evaluated in different territories in hemodialysis patients with all cause and cardiovascular mortality. This study was performed in a group of 217 HD patients with a 8 months follow-up.

The main conclusions are that all types of VC were associated with all cause mortality in different models; the global calcification score obtained by the sum of calcification score in the three different territories (abdomen, pelvis and hands) presented the higher hazard ratios for all cause mortality.

Femoral calcifications and digital calcifications were also associated with cardiovascular mortality but only in the model 4; global calcification score was associated with cardiovascular mortality in all 4 models.

This study shows once again an important association of vascular calcifications with mortality in dialysis patients and once again demonstrates the utility in evaluating the presence of VC with plain X-ray. In this study, vascular calcifications evaluated in different territories presented different hazard ratios for all cause and cardiovascular mortality.

Minor essential revisions:

1. The lack of association of some partial vascular calcification scores with cardiovascular mortality may be explained by the short follow-up (only 8 months). However, the authors may also need to explain the definition of cardiovascular mortality in this study. Was sudden death also included in this definition?

2. The authors should also explain that the method they used for the evaluation of abdominal vascular calcifications is neither the method described by Lena Kauppila (Kauppila LI, Polak JF, Cupples LA, et al. New indices to classify location, severity and progression of calcific lesions in the abdominal aorta: a 25-year follow-up study. Atherosclerosis 1997;132(2):245-250) nor the method recommended by KDIGO guidelines for the evaluation of abdominal vascular calcifications.

Discretionary revision:

1. In the final conclusions, I suggest that the authors may change the following paragraph:

"Lateral abdominal radiographs for the detection of abdominal aortic calcification..."
may not be superior as a prognostic tool over other radiographs”
for something like:
“In this group of HD patients with a short follow-up abdominal vascular
calcification was highly prevalent but did not show to be a superior prognostic
tool over other vascular territories evaluated…”

I declare that I have no competing interests

Level of interest: An article whose findings are important to those with closely
related research interests

Quality of written English: Acceptable

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

Declaration of competing interests:

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evaluated in different territories in hemodialysis patients with all cause and
cardiovascular mortality. This study was performed in a group of 217 HD patients
with a 8 months follow-up.

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the calcification score evaluated in three different territories (abdomen, pelvis and
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I think that this study once again demonstrates the utility in evaluating the
presence of vascular calcifications with plain X-ray. In this study, vascular calcifications evaluated in different territories presented different hazard ratios for all cause and cardiovascular mortality.

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