Reviewer’s report

Title: Cardiac valve calcification and risk of cardiovascular or all-cause mortality in dialysis patients: A meta-analysis

Version: 1 Date: 10 Apr 2017

Reviewer: Mohan Palla

Reviewer’s report:

Results and Statistics:

Author mentioned the following in results section. The confidence interval of outcome does not include 1, which suggest that there is significant difference between the two groups. However, the P-value is >0.05 which suggest there is no significant difference between the two groups.

"CVC was related to a greater risk of all-cause mortality (HR: 1.73; 95% CI: 1.42-2.11; I² = 24.6%; P = 0.242, Fig. 2) in a fixed-effect model.

CVC was associated with 1.81-fold greater risk of cardiovascular mortality (HR: 2.81; 95% CI: 1.92-4.10; I² = 48.5%; P = 0.084, Fig. 2) in a random effect model.

Subgroup analysis for the study region demonstrated that Asian patients with CVC had greater cardiovascular (HR: 3.255; 95%CI: 2.428-4.363; I² = 0.0%, P = 0.492) and all-cause mortality (HR: 1.761; 95%CI: 1.380-2.246; I² = 0.0%, P = 0.45).

Subgroup analysis was performed with the number of physicians analyzing echocardiographic recordings serving as a variable, which revealed significant decrease in the heterogeneity (all-cause mortality: two physicians: HR: 1.386; 95% CI: 1.064-1.805; I² = 0.0%; P = 0.762; one physician: HR: 2.320; 95% CI: 1.714-3.140; I² = 0.0%; P = 0.778; cardiovascular mortality: two physicians: HR: 1.890; 95% CI: 1.256-2.845; I² = 9.0%; P = 0.333; one physician: HR: 3.718; 95% CI: 2.624-5.268; I² = 0.0%; P = 0.691) (Table 2)."

After reading the above mentioned result data and looking further results data of meta-regression analysis, which mentions only p-value and says no significance is seen because P>0.1. Reader will be skeptical to trust this study whether the statistics were performed correctly.

In the Meta-regression analysis, region, follow up duration, dialysis modality, being a multicenter study or not, a randomized study or not, a blinded follow up or not served as variables to investigate the effects of CVC on the cardiovascular or all-cause mortality. No statistical differences were noticed (all P>0.1).

In addition, Meta-regression analysis showed that there was a trend towards the number of physicians analyzing echocardiographic recordings being correlated to study outcomes (all-cause mortality: P = 0.054; cardiovascular mortality: P = 0.061).
Finally, with the help above mentioned points regarding the review of this manuscript, I would not accept this manuscript for publication.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

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