Reviewer's report

Title: Impact of diabetes on sarcopenia and mortality in patients undergoing hemodialysis

Version: 1 Date: 14 Sep 2018

Reviewer: Ken Sugimoto

Reviewer's report:

Introduction

Line 79 - and importantly physical function. Sarcopenia is defined as loss of muscle mass and strength or function, and severe sarcopenia loss of mass, strength and function. This should be made clear.

Line 80 - it would be helpful to state what the Asian criteria are in full as you are going to use these later in the study. You refer to this criteria several times and they must be stated in full either here or the methods for clarity.

Line 91-92 - you have already said sarcopenia is loss of muscle mass and strength, you do not need to repeat this - delete.

Line 92 - we don't know what the Asian criteria are - see comment above - you need to include them in the introduction or methods

Line 95 - this paragraph - you don't really explain why you are focusing on HD patients. You say it is necessary to find out accurate figures for sarcopenia but you don't indicate why specifically HD.

Methods

Line 113 - retrospective ethics approval is not usual, nor only verbal consent. I think this requires explaining. In addition, the opt-out process requires explaining as this also is unusual.

Line 120 - how was handgrip strength tested. This is crucial since the hand used, the position and the process can all influence the result.
Line 127 - how was dry weight determined?

Line 131-132 - from where are these cut-offs derived. Please include the original reference.

Results

Table 1 - numbers should be reported as % as well as actual numbers for gender.

Line 157-158 - of course HS and SMI are lower in the sarcopenic group because these are the diagnostic criteria you have used to define sarcopenia. It seems unnecessary to state this as though it was a finding.

Discussion

Line 180 - it is over stating the results to say this cohort represents all Japanese patients undergoing HD. This study shows a 40% in this study cohort only. You have made no attempt to demonstrate that this cohort is in any way representative of all HD patients and it is a relatively small cohort. Please change this line.

Line 184 - I am sure this cannot be the only study to show DM is an independent predictor of mortality. Please can you back up this state with comparisons of other work and/or say that these findings concur with others.

Line 195 - can you say more than 'considerable variations' - please give some specific figures.

Line 238 - The conclusion could be modified slightly to say ….The present study determined that the prevalence of sarcopenia among - this cohort of - patients undergoing HD was 40%.
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.

Yes

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.

Not relevant to this manuscript

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Please indicate the quality of language in the manuscript:

Acceptable

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