Reviewer’s report

Title: Does sarcopenia predict change in mobility after hip fracture? A multicenter observational study with one-year follow-up

Version: 0 Date: 29 Jun 2017

Reviewer: Francesco Landi

Reviewer's report:

The aim of the present study was to investigate if sarcopenia predicts change in mobility after hip fracture. Even thought the topic is of great interest, there are some methodological issues that need to be addressed in the revised version.

MAJOR COMMENTS:

1) In the methods section the authors write that sarcopenia status was determined in 201, of whom 39% had sarcopenia, 66% had low muscle mass, 53% had low grip strength and 8% had low pre-fracture mobility (NMS < 5). What does it mean that sarcopenia status was determined in 201 subjects of whom 39% has sarcopenia? This is not clear for the readers. Please clarify in the text how the study sample has been considered.

2) The authors conclude that the EWGSOP sarcopenia definition needs further validation in patients with hip fracture. The authors considered the three domains addressed in the European consensus; however, they use for muscle mass and for muscle performance measurements not specifically addressed in the EWGSOP sarcopenia definition. The conclusion needs to be changed because the results presented are not related with the European definition of sarcopenia.

3) Handgrip was tested with the subject sitting in bed or in a chair. The authors did not clearly indicate the time of baseline assessment. How many days after surgery?

4) No information is given about living environment (home, nursing home) after the hospital discharge. The setting could influence the results. If this issue is not possible to address, it is important to add them as a relevant limitation of the study.
MINOR COMMENTS:
The reference should be updated with some recent articles.

The association between sarcopenia and functional outcomes among older patients with hip fracture undergoing in-hospital rehabilitation.
Osteoporos Int. 2017 May;28(5):1569-1576.

Prevalence and Clinical Correlates of Sarcopenia, Identified According to the EWGSOP Definition and Diagnostic Algorithm, in Hospitalized Older People: The GLISTEN Study.

Sarcopenia in daily practice: assessment and management.

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.
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