Review of: "The SARC-F is a useful screening tool for detecting primary sarcopenia but not disease-related sarcopenia in ageing polio survivors"

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Potential competing interests: The author(s) declared that no potential competing interests exist.

Comments to the Authors

The manuscript is adequately written and structured. The methodology used to achieve the proposed objective is appropriate. As primary objective, the study sets forth the assessment concerning the accuracy and usefulness of the SARC-F questionnaire in a group of the polio survivors with minimal residual paralysis. As a strength, this experimental model shows the fact that the same polio survivor participant is his or her own control, besides adding a second control group of healthy elderly adults of similar age. Accordingly, it is suggested that in the study design description, the authors mention it only as: "case-control study". I believe it would be convenient, due to the subject of the study, to make a brief review over the "minimal residual paralysis". The term "minimal" should be defined, as well. Are there any specific scales for stratifying the degree of paralysis in polio survivors?

Methods

Muscle strength: report how many measurements were performed with the handgrip dynamometer. If more than one, what value was taken as the test result or was it an average of all the readings? The authors describe two polio survivors with upper limb involvement. I suggest a brief consideration of the grip strength measurement in both participants (e.g., whether the measurement was taken from the unaffected or dominant arm? Given that most of the population sample of polio survivors showed lower limb involvement, the question arises as to whether the measurement of grip strength objectively represents muscle strength.

Results

The BMI for polio survivors at risk of malnutrition based on MNA should be mentioned separately from the BMI of the total group (female: 29.5 ± 5.9 and male: 30.0±5.9 kg/m2) as it is confusing for the reader.

We suggest reviewing the number of dots corresponding to the polio survivors in Figure S1. In the text, there are #14 polio survivors at risk of malnutrition, while in the figure there are #13. If malnourished (#1) was included, the following should be added to the text: "…As outlined in Figures S1 and S2 in the supplementary material, eight SARC-F positive and six SARC-F negative polio survivors were found to be at risk of malnutrition and malnourished" (page 6, paragraph 1, line 1-2).

A correlation test is not enough to claim the existence of an association between nutritional status and sarcopenia. In this regard, consider using a multivariate model (page 2, paragraph 1, line 4).

Activity-related Sarcopenia

The authors mention: "Among the 11 males identified as possible sarcopenic, there was a non-significant reduction in grip

strength", when compared with whom or what?

No comments concerning the ASMI results.

Figures

1: Control Group. In the text, 12 controls are mentioned, while 10 are represented in the figure. Check

I suggest that Figure #3 be Figure #2 to follow the diagnostic guidelines in the EWGSOP2 (Screening: SARC-F, diagnosis confirmation: fist strength and functional testing severity).

I also suggest replacing dots and lines for bars in Figure # 4, so as to have a better understanding of the graph.

In Figure S2, was correlation performed according to the total number of polio survivors (#30) or to the 14 participants at risk of malnutrition and malnourished?

Tables

S2: illustrates the sensitivity and specificity of SARC-F. I suggest replacing it with a Roc curve, in line with the objective of the study.

Comment to the Editor

The strength of this work lies in its design and the integration of low-cost and highly available diagnostic tools for sarcopenia detection and diagnosis in health care centers. However, the weakest aspect of the study lies in the ability or inability of these diagnostic tools used to distinguish sarcopenia from disability in the population studied. This aspect is briefly mentioned by the authors in the discussion and barely developed in the manuscript.