Reviewer's report

Title: A mixed exercise training programme is feasible and improves quality of life and muscle strength in multiple myeloma survivors

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Reviewer: Saskia Persoon

Reviewer's report:

Although the authors made substantial revisions to the original manuscript, which certainly improved the manuscript, some major and minor points have remained.

- Major Compulsory Revisions

1. Introduction and discussion
   In this section the authors state that there is limited evidence about exercise programs in patients with multiple myeloma, but I wonder why the study of Knols et al. (2011) was not incorporated. A substantial part of the study sample in this study consisted of patients with multiple myeloma, and they did include patients in the rehabilitation phase. I advise to include this study in the introduction and discussion.

2. Patients and Methods
   It is not completely clear how patients were recruited, and this is an important point as one of the main outcomes is study uptake and screen pass rate. Please provide more information.

3. Patients and Methods, Exercise Program, second paragraph
   Although the content of the exercise program is now much better explained, I miss some crucial information about the resistance exercises. I understand that these were individualized; however there must have been some format? Which (and how many) exercises were performed and at which intensity? Furthermore, it is essential to show how the resistance exercises were adjusted in case of (vertebral) fractures. This information will tells us a lot about the feasibility of the program in this group of patients.

4. Study outcomes, first- third paragraph / results
   I still miss some important information about the bicycle ergometer test. Please include information about the protocol which was used. Concerning the hand-held dynamometer, please define the 'best' measurement. I also still miss the overall scores for the HADS and also the statistical analysis on this data which was announced in the analysis part. The number of adverse events (and thus the safety of the intervention) was monitored by the use of analgesics. However, not every adverse event related to the intervention would have to increase the use of pain medication. Is it not possible that adverse events were
missed? And conversely, pain induced by other causes can also lead to use of analgesics. Please clarify.

5. Study outcomes, analysis
A paired T-test is a valid test if you compare data of different time points of the same patients. However, in this study there are three time points, making it more appropriate to use a one-way ANOVA.

6. Discussion
A serious limitation of this study is the design, i.e. it is a single arm study. This should be discussed in the discussion. Because it is a single arm study, more nuance is warranted concerning the conclusions about the effectiveness of exercise in these patients.

- Minor Essential Revisions
  1. Overall.
  The text could be shorter. Furthermore there are some sentences/statements in the introduction and discussion which seems not to be supported or in need for more nuance.

2. Discussion, first paragraph
According to the authors, the study uptake is 80%. However the 4 patients that withdrew from the study before baseline measurements are not taken into account here. These patients should be included in the calculation of the study uptake or of the attrition rate.

- Discretionary Revisions
  1. Study outcomes, third paragraph
  I suppose body mass, standing height and body composition were not measured to assess cardiorespiratory fitness. In addition please rephrase the sentence “Knee extensor…10 times”.

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

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
I declare that I have no competing interests