Reviewer's report

Title: Effects of dietary supplementation with a standardized aqueous extract of Terminalia chebula fruit (AyuFlex®) on joint mobility, comfort, and functional capacity in healthy overweight subjects: a randomized placebo-controlled clinical trial

Version: 0 Date: 01 Jul 2017

Reviewer: Gity Sotoudeh langroudi

Reviewer's report:

The study seems to be carefully conducted and clearly reported. However, there are some points that need to be addressed.

Major comments

1. The authors mention that they collected dietary intake and physical activity data of subjects. However, they did not report the results anywhere in the manuscript.
2. Statistical analysis should be adjusted for some important variables such as age, body mass index, physical activity and energy intake of subjects.

Minor comments

Abstract

1. The authors should give rationale behind selection of T. chebula fruit for joint mobility, comfort, and functional capacity in introduction.
2. Please spell out some abbreviations such as VAS, ROM, ECM.

Introduction

1. The authors address some other studies about T. chebula fruit extract. However, the gap of other studies has not been mentioned.
Methods

1. The authors mention that "the subjects were ranked according to bodyweight, placed into block groups of 3 and .....". If they mean stratified randomization, the categories for body weight should be mentioned.

2. Regarding to high frequency intake of multivitamin in America, please provide information on this dietary supplement.

3. The authors mention that "A total of 166 potential subjects were contacted for participation". However, the sampling method is not clear. How these subjects identified to be contact?

4. The criteria for overweight is not provided.

5. In inclusion criteria, the following criteria should be placed in exclusion criteria: Non-smoker- Subjects with a history of knee or hip joint replacement surgery, or any hip or back pain which interferes with walking or exercise testing utilized throughout the study- No knee joint discomfort at rest.

6. Inclusion criteria in the text and table are not the same.

7. The age rang in Abstract and Table 2 is not the same.

8. The authors mention that "subjects were enrolled, and randomized into one of three parallel groups to participate in the study". However, the method used to generate the random allocation sequence has not been explained.

9. The placebo content and its production agent are not mentioned.

10. It is not clear why the authors did not calculate body mass index instead of just weight?

11. It is not clear if the blood sampling was in fasting state.

12. Please provide reasons for using multiple criteria for assessing outcome variables.

13. Please provide references for methods of measuring inflammation biomarkers.
Results:

1. Please spell out some abbreviations such as LBP in the text and PBO in tables.

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

No

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.

I recommend additional statistical review

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