Reviewer's report

Title: Efficacy of methylsulfonylmethane supplementation on osteoarthritis of the knee: a randomized controlled study

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Reviewer: Vilai Kuptniratsaikul

Reviewer's report:

Concerning to the manuscript entitled “Efficacy of methylsulfonylmethane supplementation on osteoarthritis of the knee: a randomized controlled study”, reviewer has some questions / comments to authors that were Major Compulsory Revisions as followings:
1. Your randomization seems strange. This may cause bias to the study.
2. Do you calculate the sample size before enrollment?
3. How do you manage lost case in your ITT analysis? You did not mention about this.
4. You did not report compliance of drug between both groups.
5. For the safety, how can you record the AE? Please describe in detail.
6. You had so many outcomes and only 2 in primary outcome and 1 in secondary outcomes were statistical significant, but not clinical significant. Therefore, you should be careful in your conclusion that MSM could be an additional therapy option for patients with knee OA. Usually we concern about drug’s efficacy, followed by its safety.

When assessing the work, reviewer responds to the following points:

1. Is the question posed by the authors well defined?
Yes.

2. Are the methods appropriate and well described?
I wonder about the randomization method, adverse event record, compliance and sample size calculation.

3. Are the data sound?
Yes.

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?
Yes.

5. Are the discussion and conclusions well balanced and adequately supported by the data?
Uncertain.

6. Are limitations of the work clearly stated?
   Yes.

7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?
   Uncertain.

8. Do the title and abstract accurately convey what has been found?
   Yes.

9. Is the writing acceptable?
   Yes.

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I declare that I have no competing interests.