Reviewer's report

Title: The challenges of gout flare reporting: Mapping flares during a randomized controlled trial

Version: 1 Date: 15 Feb 2019

Reviewer: Reviewer 2

Reviewer's report:

PEER REVIEWER ASSESSMENTS:

OBJECTIVE - Full research articles: is there a clear objective that addresses a testable research question(s) (brief or other article types: is there a clear objective)?

No - there are minor issues

DESIGN - Is the current approach (including controls and analysis protocols) appropriate for the objective?

No - there are major issues

EXECUTION - Are the experiments and analyses performed with technical rigor to allow confidence in the results?

No - there are major issues

Statistics - Is the use of statistics in the manuscript appropriate?

Yes - appropriate statistical analyses have been used in the study

INTERPRETATION - Is the current interpretation/discussion of the results reasonable and not overstated?

No - there are minor issues
OVERALL MANUSCRIPT POTENTIAL - Is the current version of this work technically sound? If not, can revisions be made to make the work technically sound?

No - manuscript has some fundamental flaw(s)

PEER REVIEWER COMMENTS:

GENERAL COMMENTS: Overall impression: This is a secondary analysis of a RCT investigating flare reporting in patients with gout. Unfortunately the paper could be reported far clearer with study objectives not linked throughout to the Methods and Results. There is overlap with the trial results which precludes the clear reporting of the original study assumptions on validity of reporting methods.

What the authors did well: They have selected an interesting question which I had anticipated would be answered with a systematic literature review.

REQUESTED REVISIONS:

Thank you for providing the opportunity to review this paper. Unfortunately there are some major issues with this work. This is largely on the overlapping report of the principal study findings in the methods used to answer this question. I think there is confusion in reporting the trial (between-group) findings here. I do not think that group allocation is as important as the authors suggest and I would have analysed the data irrespective of this. I think flare patterns are an important area for study and data on these patients have been presented in previous trials. I would therefore recommend that this question be answered with a meta-analysis or Individual Participant Data meta-analysis approach. This will provided more than 114 flare patients and would provide greater assurances over the conclusions.

I think the authors have got an interesting question but I don't think answering it with this data is particularly useful. There is also confusion in the title and abstract as I was initially expecting this to be a systematic review of flare reporting in patients with gout, and it turned out to be somewhat different.
From a reporting perspective, I think the authors may have used subheadings to greater effect in the results section. By structuring by subheading of the study objectives, there could have been far clearly linkage throughout the paper to reporting what was intended, and this may have clarified the message of the paper.

There is overlap in reporting the main study findings. Please consider whether there is a need to acknowledge results by group allocation. To answer this question, I don't think the intervention is important. The answer may have been more appropriately answered with an Individual Participant Data meta-analysis.

Note: This reviewer report can be downloaded - see attached pdf file.

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.

No

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.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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