Reviewer’s report

Title: Effect of Zingiber officinale R. rhizomes (ginger) on pain relief in primary dysmenorrhea: A placebo Randomized trial

Version: 3 Date: 27 March 2012

Reviewer: Suzanna Zick

Reviewer’s report:

The authors should be commended for the extensive rewriting and reanalysis they did for this second draft. The paper is now much clearer in terms of both methods and results and provides an encouraging treatment for primary dysmenorrhea.

I would suggest a few other minor changes to help improve clarity and clinical relevance

1. Results Section p.7-8: I would recommend putting the t-test results and those adjusted for baseline values together in one paragraph instead of separating them. This would give you two paragraphs one on severity of pain and one on duration. I would also add how many days ginger decreased pain and the percentage of pain severity that was achieved in the two ginger groups, e.g., decreased by more than 5 days compared to placebo and a 25% reduction in pain.

You collect adverse effects but don’t report on them. Why not? I am guessing a short paragraph would do.

2. Discussion: Your results imply that taking ginger several days before the onset of the menstrual cycle was significantly better at decreasing the duration of pain. There is also some indication but no statistical analyses if protocol 2 is better than protocol one, although just looking at it protocol two appears better. Some discussion about this would be helpful.

Also, some discussion of this level of pain reduction (caused by ginger) is clinically significant is needed. Generally a 3 point decrease or 30% reduction of pain on the 10 cm VAS (compared to placebo) is considered clinically significant. Is this also true for dysmenorrhea? How do your results compare to pain relief with NSAIDs and with other ginger study in dysmenorrhea.

I would suggest discussing what future studies (beyond just larger) are needed and why to help determine if ginger is a viable treatment option for dysmenorrhea.

Limitations: I would add that you did not analyze the gingerol or shogaol content of your ginger powder nor was it made in a standardized fashion. Consequently we don’t know how much of key constituents were in the capsules making it hard to know what dose of other ginger capsule to give in the future and to determine if all the capsules were uniform in there gingerols/shogaol content.
In your limitations section you should also comment that no measure of adherence or blinding was assessed. Consequently, effect sizes could be exaggerated if blinding was not achieved. Conversely if some of the participants didn’t take enough capsules or at the right times it could biases your results to the null.

3. Tables: Generally much clearer. Thanks for the changes. I would just suggest adding to the table titles with either protocol 1 or protocol 2. Otherwise it is confusing with the same titles.

Also, please add to your foot note “b” that you adjusted for baseline with the ANCOVA.

Lastly, I would add another column after you first “p-value” and add the p-values for the ANCOVA here. The design of your table now makes it unclear what the p-value embedded in the table refers to and the one of the “p” also is unlabeled.

**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