Reviewer’s report

Title: Treatment of head lice with dimeticone 4% lotion: why was it more effective in a randomised controlled trial in rural Turkey than in England?

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Reviewer: Girdhar Agarwal

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Review of manuscript “Treatment of head lice with dimeticone 4% lotion: why was it more effective in a randomized controlled trial in rural Turkey than in England?”
By O. Kurt et al

1. The basic lacunae in the present study is the design part.
2. Randomization of participants is not properly defined.
3. As per protocol, different members in a family could receive any of two treatments. There is certain possibility of contamination bias. As the two products were physically similar, it will be very difficult to ensure that the members in the same family do not intermix the products.
4. In the presence of contamination bias, the fair evaluation of two products can not be envisaged. The reported high rate of efficacy could be due to this bias.
5. The better design will be to perform “cluster randomized trials (CRTs)”. Two-stage cluster sampling should be used. In the first stage, the villages should be chosen at random and in the second stage eligible households should be chosen within the selected villages. The two treatments should be randomized among “households” (not individuals).
6. For CRTs, a design effect” will be introduced and the analysis has to take into account the correlation structure within the household.

In the light of the above comments, I can not recommend the publication of the manuscript in the present form.

Level of interest: An article of importance in its field

Quality of written English: Not suitable for publication unless extensively edited

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

Declaration of competing interests:

'I declare that I have no competing interests'