Reviewer's report

Title: Scabies: an ancient global disease with a need for new therapies

Version: 2 Date: 7 October 2014

Reviewer: Kirsty Hewitt

Reviewer's report:

General points:
This is an important topic and it is good to see attention being paid to this neglected disease. I think the paper would benefit from review by a dermatologist who can comment more fully on the evidence around treatment – I am an epidemiologist.

In general I think this paper does not fully consider all of the evidence around topical and oral treatments for scabies, and presents a somewhat negative view of existing therapies. There are some key references missing, particularly the Cochrane reviews on this topic.

Major compulsory revisions:

1. Background: First paragraph, line 7 – the reference given for the statement ‘it affects 6 in 10 Aboriginal and Torres Strait Islander children at any given time, more than six times the rate seen in the rest of the developed world’ doesn’t appear to be correct. The article referenced doesn’t include the prevalence in this group, or in the rest of the developed world. A more recent reference would be better here.

2. Discussion, first sentence: I think this statement is too strong – this depends on the setting. Two Cochrane reviews have concluded that topical permethrin is the most effective treatment for scabies, and is safe. Although most trials are small and further research is needed, I do think this sentence overstates the issue. Perhaps remove ‘no’ and take the brackets off ‘few’, and clarify that effectiveness can vary between settings. (The most recent Cochrane review is Strong and Johnstone 2010 http://www.thecochranelibrary.com/userfiles/ccoch/file/Water%20safety/CD000320.pdf Other papers also underline the safety of topical permethrin (e.g. Hengge et al. Scabies: a ubiquitous neglected skin disease. Lancet Infectious Diseases 2006;6:769-779).

3. Discussion, First paragraph, second half re. ivermectin: This section feels rather biased and I think presents selective evidence about ivermectin. There are many more references than the one given, that would present a more balanced view. More research is needed to evaluate ivermectin as a mass control measure for scabies (although there is safety evidence from MDA programmes for other diseases) but there is some observational evidence of its effectiveness in controlling scabies outbreaks in institutional settings including nursing homes
(see the articles referenced above).

4. The 1997 Barkwell paper cited in the ivermectin section as showing increased deaths among elderly patients in an institutional setting is poor study which did not control for a number of potential confounding factors (e.g. pre-existing conditions which may predispose patients to scabies), and has been criticised. As far as I am aware no other studies have replicated these findings.

5. Table 2: ‘Comments’ re. ivermectin: I think this is rather selective, in quoting a controversial article and ignoring positive evidence regarding the use of ivermectin.

6. Table 2: References should be given for the statements given in the comments section.

Minor essential revisions:

7. Summary: In the discussion section, the word ‘A’ is not needed at the beginning of the paragraph and reads oddly. The summary section of this does not read clearly at the moment and would benefit from editing for clarity.

8. Main article: Line 7-9 of the background section re. sequelae of scabies needs a reference.

9. Discussion, paragraph 2, sentence beginning ‘Paradoxically…’ there is a typo at the end – an extra bracket.

10. Sentence beginning ‘Neither is it recommended for…’ I am not clear what this sentence means, can it be clarified and is there a reference for this? There is a recent Cochrane review regarding treatments for scabies contacts which may be useful here (Fitzgerald 2014 http://www.ncbi.nlm.nih.gov/pubmed/24566946 )

11. Background: Sentence beginning ‘Outbreaks of APGSN…’: The authors should be clearer that they are talking about a specific population group here (Aboriginal) as it reads as a general point about all scabies outbreaks. They should point out that outbreaks of APGSN are uncommon outside this community and do not always coincide with scabies outbreaks elsewhere in the developed world. Also please check that the paper reference actually supports this statement.

12. Summary, bullet 2: This is the first reference to herbal or traditional medicines in the article, therefore this bullet does not fit in as a summary of the paper without some previous discussion of this.

13. Table 2: The ‘Comments’ column re. permethrin – should read ‘growing resistance among scabies mites’

Discretionary revisions:

Consider adding some discussion of the limitations of diagnostic tools available, particularly in resource poor settings.
Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I have no competing interests.