Reviewer’s report

Title: Ocular manifestation of HIV/AIDS and correlation with CD4+ cells count among adult HIV/AIDS patients in Jimma town, Ethiopia: a cross sectional study

Version: 1 Date: 9 February 2013

Reviewer: Sophia Pathai

Reviewer’s report:

Thank you for asking me to review this interesting manuscript that adds to the limited body of work on HIV-related eye disease in resource-constrained settings in the HAART era. This is a valued and informative contribution to the field, however some issues do need to be addressed:

Major Compulsory Revisions

1. In the Methods it is mentioned that a sample of 369 patients were evaluated – please explain how this sample was chosen e.g. random sampling; also please detail if this sample varied from the main clinic population e.g. gender, age, CD4 count distribution. Also please detail if the two clinics varied demographically – why were 2 clinics evaluated?

2. The authors say that proportionate numbers of patients were taken from the pool of pre-HAART and HAART patients. Please give the criteria for initiating HAART in this setting. I am a little confused because the mean CD4 counts between these two groups were very similar (366 vs. 368 cells/mm3), and I would suppose that those initiating HAART would generally have much lower CD4 counts? Can the authors please explain this similarity in CD4 counts?

3. Please can the authors clarify the pre-test done on 10% of the study subjects and its meaning in relation to the study.

4. In the Results 348/369 of the participants were included in the study – please explain why these participants were not included in the analysis and if they differed from the rest of the participants.

5. Please remove the word ‘about’ and use an accurate estimate (first sentence, Results).

6. If the prevalence of ocular manifestations was higher among patients on HAART, yet the CD4 counts were similar between the two groups, what explanation(s) can the authors provide for this?

7. The paragraph on logistic regression is confusing and needs to be written more clearly. Focus on the adjusted estimates, as these are the estimates that matter. The authors mention that they have adjusted for age, sex, CD4 count where applicable, but do not give the adjusted estimate for the OR relating to ART use. Please can they give the adjusted estimate for this outcome?

8. Please can the authors explain why they feel blepharitis is an HIV-related eye
condition and therefore included in their evaluation. If blepharitis is removed, then what is the overall prevalence of HIV-related eye disease? I think to use blepharitis (n=11) of sample is a little misleading unless the authors can provide good rationale as to why it is related to HIV.

9. How was the diagnosis of conjunctival squamous cell carcinoma made? Similarly for Kaposi lesions which are mentioned in Table 4, but not in the text.

10. Please clarify which cranial nerve palsies were identified.

11. In the section on posterior segment pathology it should be mentioned that no cases of CMV retinitis where detected as this is a very important retinal OI. Also what about ocular tuberculosis? Where any cases detected? What is the underlying TB prevalence in the population?

12. The third paragraph in the Discussion is a little confusing. It appears that the reason given for patients with HAART having a higher prevalence of ocular manifestations than the pre-ART group is related to re-constitution of CD4 T cells appearing after the ocular manifestations. However this is not in line with the similar CD4 counts between the HAART and ART groups. Please clarify this paragraph. Did the authors consider immune reconstitution syndrome? This can occur much sooner than 27 months, infact the highest incidence is 8-16 weeks after HAART initiation, see Otiti-Sengeri et al Current Opinion in HIV and AIDS 2008, 3:432–437

13. In Table 3, I suggest an additional column with ‘Adjusted ORs’ next to the unadjusted estimates. They are reported in the results but it is far easier to compare if they are reported side by side. There should be a footnote at the bottom explaining the factors adjusted for.

• Minor Essential Revisions.

1. Throughout the manuscript please report odds ratios and percentages to 2 decimal places only, there is no need to use 3dp

2. In the Tables it would be better to show the only the p-value rather than the chi-squared value as well as it is a little distracting when trying to interpret the p-value

3. In Table 3, please report the ORs to 2 decimal places only – there is no value in reporting to 3 dp.

4. It would be useful to know the prevalence of co-existing tuberculosis within the study populations.

5. In Table 6 I think it is worth adding a footnote stating that there were no cases of CMV retinitis

• Discretionary Revisions

1. To reduce the amount of Tables within the manuscript, Tables 4 and 5 could be merged
Level of interest: An article whose findings are important to those with closely related research interests

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

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

Declaration of competing interests:
I declare that I have no competing interests