Reviewer’s report

Title: Could caregiver reporting adherence help detect virological failure in early treated Human Immunodeficiency Virus-infected infants? Experience from the PEDIACAM study in Cameroon

Version: 2 Date: 4 December 2014

Reviewer: Malik Coulibaly

Reviewer’s report:

- Minor Essential Revisions

The author can be trusted to make these. For example, missing labels on figures, the wrong use of a term, spelling mistakes.

Introduction

In page 4, lines 11 & 12 the authors said that “viral load is the best marker of adherence to cART”, this is true when considering antiretroviral naïve patients.

Methods

1) Why the authors considered the caregiver’s recall of missed doses until 14 days, when it is advisable to avoid going beyond seven days because of bias related to memory?

2) In page 9 line 7, there is a typo: it is M24 instead of M12.

Results

1) When I checked the results in page 10, I couldn’t see the distribution of the study population with respect to the antiretroviral regimen. This is important as lopinavir has a bad palatability which could result in difficulties in administrating of the required complete dosage.

2) I suggest that the author present the table of logistic regression which shows no significant association between reported difficulties and missed doses.

3) In table 3, page 23, I tried to check the statistics, and I found that an error occurred when calculating the LR+ and LR- of the “#2 cumulative missed (B)” at M12.

   LR+ = sensitivity/(1-specificity) = 2.0 (instead of 4.4)
   LR- = (1-sensitivity)/specificity = 0.5 (instead of 0.4)

4) The titles of the figures 1 & 2 should be under the figures instead of above. Please remove the vertical segment of line in table 2, page 22.

Discussion
1) Why missed dose reporting was not significantly associated with any reported difficulties? Is it related to a lack of power?

2) Genotypic antiretroviral resistance: the authors have detected 7 patients presenting resistance out of 14 tested (50%); could they comment on how this result may affect the reliability of using viral load to assess adherence to antiretroviral.

3) To limit the bias of the adherence assessment through questionnaires, it is advisable to avoid conducting the interview by physicians who are directly in charge of the patient treatment. Even if the authors briefly mentioned the possibility of the respondents to be influenced by their health care providers, they did not point out the fact that in their study, the physicians were the most represented (34.8%) among the interviewers and the psychosocial workers were almost the least (19.8%).

4) The authors should mention a limit related to their method of missed dose assessment. In page 8, lines 18 &19, it is stated: “when a quarterly visit was performed but the adherence questionnaire not completed, we considered the previous number of missed doses for that particular visit”. We perceive limitations if the reasons why the patients attended the quarterly visit with an uncompleted questionnaire, were related to poor adherence specifically at that particular visit, while they performed well in the previous visit.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**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