Reviewer’s report

Title: Outcome of highly active antiretroviral therapy in HIV-infected Indian children.

Version: 1 Date: 18 September 2014

Reviewer: Dalton Wamalwa

Reviewer’s report:

Summary
This article describes a retrospective study evaluating the response of HIV-infected Indian children to NNRTI-based Highly active antiretroviral therapy (ART). The median follow-up of the children is approximately 9 years and the main outcomes are survival, CD4 response, frequency of opportunistic infections and hospitalization.

The major strength of the study is the long follow-up while the key weakness is lack of systematic virologic data.

Nonetheless it is an important contribution to pediatric HIV literature from the Indian sub-continent and should be considered for publication after the following comments are addressed:

Major Compulsory revisions

The results should be presented in a sequential style with appropriate subheadings in order for readers to follow. Suggested subheadings are Baseline characteristics, Response to antiretroviral therapy, Predictors of response to antiretroviral therapy and Adherence and safety. More information should be provided on how adherence to ART was measured and the level of adherence found.

The results on treatment failure should be separated from toxicity to ART. In the current version treatment failure is presented along with toxicity-related treatment switches yet the two are entirely different.

Data on viral load should be presented systematically to include the number of children with baseline viral available and more critically the change in viral load following ART. This is important missing information which should be either shown or acknowledged to be a limitation. This is because in many settings there is a
significant disparity between clinical and virologic failure and it would be important to see the situation in this Indian study. Viral load response should be presented as proportion of children with suppressed viral load at various points in time as well as mean drop in log 10 viral load.

Minor Essential revisions
Indicate whether the mean duration to treatment failure (given as 38.8 months) refers to clinical or immunological failure or both.
Clarify the seeming discrepancy between the high level of failure to thrive (given as 70%) and the anthropometric data shown in table 1 that indicate that 77% of the children did not have severe malnutrition at baseline (based on WAZ scores).
Comment on the male: female disparity found in this study
Statistical review : Predictors of response could be best shown in a separate table with appropriate statistics.

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:
None