Reviewer’s report

Title: Growth, immune and viral responses in HIV infected African children receiving highly active antiretroviral therapy: a prospective cohort study

Version: 9 Date: 22 April 2010

Reviewer: sharon nachman

Reviewer’s report:

Thank you very much for allowing me to review the paper submitted by Drs Musoke et al titled: Growth, immune and viral responses in HIV infected African children receiving highly active antiretroviral therapy; a prospective cohort study. This interesting paper builds on the existing literature regarding the effects of early therapy of HIV in perinatally infected youth. The authors investigated growth as a measure in of itself as a marker of success in the use of HAART in these children. Rightfully so, they acknowledge their (often) inability to obtain either CD4 or viral load on their patients and sought to use growth as a marker of success. They show that despite lack of complete viral suppression and perhaps lack of significant increases in CD4, HAART contributes to increases in growth parameters.

By including children over 2 years of life, the authors have shown that the benefit to initiating HAART at any age is a valid argument that must be made in the developing world. However, the benefit is lessened when it is started later in life, further underscoring their suggestion that starting earlier is always better. Unfortunately this study used WHO criteria for initiation of HAART based on 2003 criteria. Perhaps if more recent criteria were used we would have seen different growth parameters in those who were not the sickest of the children. Of interest, their finding of best success with children with CD4%>10% allows us to think that everyone would benefit from HAART.

I suspect that stunting and underweight findings in Ugandan children and subsequent treatment with HAART for HIV may not result in all children attaining standardized growth. Factors including malnutrition in the household, infectious syndrome and other reasons for stunting will still be present, even after HAART therapy is initiated.

In the future it will be critical to monitor adherence, development of resistance and long term toxicities of these therapies if the growth gains noted here are to be continued.

There are no major compulsorey revisions needed

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