Reviewer's report

**Title:** Cognitive and psychosocial development of HIV pediatric patients receiving highly active anti-retroviral therapy: a case-control study

**Version:** 1  **Date:** 6 August 2010

**Reviewer:** Diane Melvin

**Reviewer's report:**

1. There is a paucity of psychological outcome data for European children with HIV, as the authors suggest, and this attempts to redress this. However the report produces more questions than answers. For example were the controls appropriately matched to the case group?. There was no mention of ethnicity in matching the groups or whether the children had similar care situations (particularly important for the psychological adjustment scale) Also the control group's IQ scores were significantly below the test mean norms and lower than the children with HIV without encephalopathy - and there was no mention of why this might be. May suggest these tests were unreliable measures. Also for the HIV group there was no mention of how long the children had been on HAART.

2. The small number of children with HIV (especially those with encephalopathy) make the significance of the findings difficult to generalise to other cohorts. Also the very wide age range adds to the difficulties in reliability e.g. known that developmental scores at 3 years are measuring different things to those on cognitive tasks carried out in adolescence.

3. On SDQ scores it may have been more useful to give mean scores on the different subscales as well as numbers in abnormal and borderline groups as this would have been a more real comparison between the groups. It is rather ambitious to say that those with encephalopathy have higher conduct problems as it was only one child. What about the influence of age of children on score of SDQ?

4. What about relationship between each of the case’s developmental/cognitive scores and score on SDQ - that would have been an interesting comparison to do rather than just using group comparisons and may have backed up your suggestion that there is a relationship between emotional/activity spheres and children with HIV.

5. The data confirms what has been found from other studies about improving outcomes for children with HIV and in order to add to the knowledge the authors need to provide more justification about why they choose to look at certain background data and the choice of tests and controls. Also to have addressed the issues of small numbers and wide age range in limitations.

6. English is good and the presentation is clear.
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 declare I have no competing interests