Reviewer's report

Title: Effects of ethnicity and CD4 count on glucose metabolism among HIV patients on highly-active antiretroviral therapy (HAART)

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Reviewer: Vicente Estrada

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This is an interesting study that explores the effect of race on carbohydrate metabolism (HbA1c, fasting glucose and insulin levels and after OGTT). Their major findings are that African-American and Hispanics present show the more severe abnormalities, thus they may be at higher risk of diabetes. They also found a novel interaction between CD4 counts and ethnicity; the authors agree in the discussion section that the explanation of this finding is very complex.

I have several question/comments:

1. Why only a population of hypertriglyceridemic patients were selected?. HyperTG is a multifactorial finding in HIV, frequently associated with the use of PI-based therapies. No clear explanation for this selection bias was provided. The results of the study can be applied only for patientes on ART with HyperTG, this must be described in abstract conclusions.

2. No mention is made on NRTI backbone combination: Thymidine analogues clearly influence on diabetes risk.

3. First-generation PI (indinavir, saquinavir, nelfinavir) were associated with higher glucose metabolism abnormalities than the more recent ones (atazanavir, darunavir). A brief description of what PI were more commonly used must be provided.

3. Median viral load is 2,41 log; The proportion of undetectable (<50) was similar beteween groups?

4. No mention is made to % of patients with HCV/HIV coinfection, which may influence glucose metabolism.

5. Lipodystrophy is associated with more profound glucose abnormalities. The proportion of patients with this complication must be provided.

6. Table 1 is extraordinarily complex and very difficult to read. I suggest reducing its content, eliminating minor rows (eg 90 min OGTT on some indices, such as HOMA-B, weight and height, hip circumference, etc.), or

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 that I have no competing interests