Author's response to reviews

Title: The Lipid Profile of HIV-infected patients receiving Antiretroviral Therapy in a Rural Cameroonian Population

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Reviewer number: Tazoacha Assonganyi

Author's response to reviews:
Thank you for consideration of our manuscript for publication in your journal.
We equally thank the reviewer for the pertinent comments.
We have reviewed the above manuscript according to the reviewer’s comments.

Introduction:
1) (Major compulsory) Highlight reasons why rural and urban changes may be different by including differences in diet, etc.
   • higher levels of TC, TG and LDL-c with lower levels of HDL-c in the urban than in the rural area of a general population of Cameroon due to differences in diet have been reported by Lissouk et al. in an article that has now been included and cited in ref[15]

2) (Major compulsory) The several studies in Cameroon in the literature on the same subject are omitted. The following articles (plus any others that may be got through literature search) should be consulted and included:
a) Danwe C et al. (2005), J. Med. Sci. 5: 78-82
   • Articles on the effect of HIV on blood lipids in HAART-naïve persons and on the effects of HAART on blood lipids in HIV-infected persons have been consulted where possible and we have now included the following: Ngondi JL et al. (2006), Teto G et al. (2013), Ngogang J et al.(2008) and Nguemaim NF et al. (2010) and cited in ref[9-12]
• We equally updated reference 1 using the UNAIDS report for 2013 in place of the 2012 report.

Methodology:
1) (Major compulsory) The general set-up of the experiments does not allow the conclusions drawn from the results on “those reported using alcohol”, smokers, and existing metabolic conditions. Proper case-control studies are needed for such conclusions to be drawn. Amount of alcohol consumed by subjects, and number of cigarettes smoked a day, length of consumption, etc are not indicated. Therefore discussion of results related to these should be nuanced.
• In discussion paragraph 10, we did acknowledge the fact that, the amount of alcohol intake per person was not measured but we have now nuanced our interpretation of the findings in the light that heavy drinking is rather rare in a (study) population made up of mostly women in a rural (poorer) African setting.
• We have now discussed our findings in the light of a possible information bias associated with under-reporting of undesirable lifestyles like smoking but also with regards to the big odd ratios that is unlikely to be a chance finding.
• We have been careful not to draw definite conclusions (such as causality) about the associations found given the observational cross-sectional approach we have used.

2) (Major compulsory) Methodology does not indicate that subjects were interviewed/questioned
• we have now included that, a structured questionnaire was used to collect data

3) (Major compulsory) There were “only” 6 smokers; as compared to 9% (10) that “reported being on diet”, 4.5% (5) that interrupted treatment, and “<10%” (<11) who had metabolic/cardiovascular problems. This is to say that if the study bases analyses on 6 smokers, these other parameters are important enough to have affected the results. The normal approach is to exclude subjects with conditions that might affect changes in lipid metabolism like infections with Hepatitis B/C, diabetes, abnormal thyroid hormones, use of hormonal contraceptives, obesity, hypertension, family history of dyslipidemia, smoker, consumption of alcohol, etc. Therefore discussion of outcomes should be nuanced.
• We did not want to be very restrictive in selecting participants for fear of obtaining a sample that is not representative at all. This trade-off was taken into account at statistical analysis by using multiple regression methods.

4) (Major compulsory) The “enzymatic-linked colorimetric methods” have to be briefly described. Are they ELISA based or the usual colorimetric enzyme assays?
• Usual colorimetric enzymatic techniques were used. We also made use of the Friedewald formula. A paragraph on a brief description of the laboratory technique has been included.

5) (Major compulsory) Nkongsamba, the site of the study is not a “rural” area. It is one of the big cities with Yaounde, Douala, Limbe, Kumba, Bafoussam, and others that are managed by Government Delegates. The authors should justify
why they considered it a “rural” area, beyond just stating that most of them engage in subsistence farming.

- We have now added that users of the clinic come from city of Nkongsamba obviously but massively constitute of referrals from the rural municipalities of Melong, Bare-Bakem, Nlonako, Manjo, Loum, Njombe-Penja, Mbanga, Bonalea and Dibombari that make up the Moungo Division; equally from neighbouring rural areas of Bangem and Tombel in the South-West Region and from the rural municipalities of Kekem and Santchou in the West Region of Cameroon.

Results:
1) (Discretionary) Report “3000 cycles per minute” as g/min
   - “g/min” now replaces “cycles per minute”

2) (Major compulsory) It is not clear whether the “yes” and “no” in Table 1 for “heart condition” and “metabolic condition” are based on interview responses or clinical examinations.
   - These conditions were confirmed by data from their medical records

Discussion:
1) (Major compulsory) Inclusion of the articles cited above, that the authors seem not to know about would greatly modify the discussion.
   - The articles have been included where appropriate

2) (Major compulsory) Comparison of results to those of subjects from South Ethiopia and Tanzania should indicate whether they were from rural or urban areas of these countries.
   - We have now indicated that they were carried out in urban areas