Reviewer's report

Title: Insulin Resistance and Adipokines serum levels in a Caucasian Cohort of HIV-positive Patients Undergoing Antiretroviral Therapy: a cross sectional study

Version: 2 Date: 7 November 2012

Reviewer: Nicola Gianotti

Reviewer's report:


This is a study aimed at assessing the prevalence of insulin resistance and its association with several adipokines, in a non-diabetic Romanian cohort of men and women with HIV-1 infection, receiving HAART.

Results provide limited original information and a revision is necessary before publication.

In general, the manuscript lacks of the description of the studied population by fasting glucose and HOMA-IR values.

Specific comments.

Abstract. “Insulin resistance …is related to antiretroviral therapy.” should be changed to “Insulin resistance … maybe related to antiretroviral therapy.” The association is not so straightforward and many concomitant causes (cART being only one of these) likely exist.

Abstract and text. “… complex antiretroviral therapy (cART).” should be changed to “… combination antiretroviral therapy (cART).” which is the usual meaning of the acronym cART. Furthermore, not all of the antiretroviral regimens are complex (e.g. single tablet regimens).

Methods. The author should measure insulin resistance also by HOMA-IR (see below).

Results. The author should report data on insulin resistance also as measured by HOMA-IR (see below). This does not mean that all of the analyses should be repeated also with HOMA-IR as outcome, but at least a description of the population by HOMA-IR values must be reported.

If authors have data on the familiar history for diabetes, these data should be mentioned, reported and included in the analyses.

Page 6. “…LOGAdiponectin with LOGTriglycerides remained associated with QUICKI index (R=0.43, p=0.007) in males.” Same R and p-value for both
LOGAdiponectin and LOGTriglycerides?
The authors present results of analyses shifted by gender, but no analysis on the overall population: as the size of the population is relatively small, also an analysis of the overall population must be presented: analyzing only subgroups separately, the numbers become very small, giving the results a very low strength.

HbA1C was not measured? If yes, results should be reported.

Discussion.
References 26 and 27 are inadequate: there are a number of studies more relevant than those cited addressing this issue.

QUICKI is one algorithm to measure insulin resistance; however, it is not necessarily the best one and it not widely used: other authors suggest that HOMA-IR should be the preferred one (Wallace and Matthews. Diabet Med. 2002 Jul;19(7):527-34.). Anyway, differently from QUICKI, HOMA-IR has been linked to clinical outcomes in HIV-infected patients in many studies (a few examples: Gianotti et al.HIV Med. 2011 Feb;12(2):109-17; Bigoloni et al.AIDS. 2012 Sep 10;26(14):1837-40; Hessol et al.J Acquir Immune Defic Syndr. 2012 Oct 15. [Epub ahead of print; Freitas et al.BMC Infect Dis. 2012 Aug 6;12(1):180; Al-Fadhli et al.Med Princ Pract. 2012 Jun 21; Veloso et al.Cytokine. 2012 May;58(2):253-60; etc). Furthermore, the absence of at least descriptive data on HOMA-IR prevents from comparisons between the results of the present study and those from previous studies.

Table 1 and table 2. Data on fasting glucose and HbA1C are missing. At least fasting glucose values must be presented.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
I declare that I have no competing interests