Reviewer’s report

Title: Circulating CD36 and oxLDL levels are associated with cardiovascular risk factors in young subjects: a case-control study.

Date: 14 January 2014

Reviewer: Lisa Lincz

Reviewer’s report:

This is a small case-control study investigating the possible association of sCD36 and oxLDL levels with cardiovascular risk factors in young subjects (18-25 years old). Apart from knowing that 55 of the 188 participants are obese, it is unclear how many actually have any other cardiovascular risk factors and therefore difficult to determine how valid the results are (i.e., statistically powered). From the OR confidence intervals in tables 5 and 6, I suspect the study is underpowered and some variables may have too few cases to be included in this style of analysis. Nonetheless, the results are mainly confirmatory of other studies and as the authors concede, are limited by lack of prospective outcome data.

Minor essential revisions:
1. Some grammatical errors throughout manuscript
   For instance ‘Endocytosis’ is used improperly on two occasions:
   …’capacity or bind and endocytosis oxLDL’….Would be more appropriate as...’capacity to bind and promote endocytosis of oxLDL’…

2. The last paragraph of the introduction contains an unfinished sentence at ref 24.

3. The captions for some tables refer to differences between genders although this is not indicated in the table. I think the authors meant groups or cohorts?

4. Full terms for biochemical test abbreviations should be included in the methods section.

Results:

5. Paragraph 1/ Table 1: Total leukocyte count should be included for completeness in light of reference to this in other studies of obesity in the discussion. Chi square p-values should be included for hypertension and gender.

6. Paragraph 2/Tables 2 & 3: The % fat mass and monocyte count were not statistically significantly correlated with sCD36 in normal-weight controls (P>0.05). Similarly the p-value for correlation of oxLDL with TC in the normal weight group was not significant (p=0.053). The corresponding incorrect statements should be removed from the text.
7. Table 4 introduces new terms that should be more clearly defined. Indicating cut-off values on the table for each yes/no variable would be useful. The number (n) of subjects in each yes and no stratification should be indicated.

8. Tables 5 & 6. It is unclear what is meant by ‘upper to third quartile’. Is this simply the third quartile? Also unclear why each table does not list the same cardiovascular risk factors?

9. Although not labelled, I am assuming the first column of OR, R2 and p-values in each table is for the univariate analysis and the second column is the adjusted values. If so, the first column is not contributing any more information than already shown in tables 2&3. I would suggest eliminating the first column of OR, R2 and p-values and then combining tables 5 and 6 into 1 table showing only the adjusted values for oxLDL and CD36 in side by side columns for ALL cardiovascular risk factors.

Discussion

10. 3rd paragraph: Have others shown increased platelet counts in obesity? Some mention and reference should be made here.

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

**Quality of written English:** Needs some language corrections before being published

**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