Reviewer’s report

Title: Abdominal fat depots associated with insulin resistance and metabolic syndrome risk factors in black African young adults.

Version: 2 Date: 17 July 2015

Reviewer: Robert Hoffman

Reviewer’s report:

Summary

The authors report the relationships of abdominal VAT and SCAT to components of the metabolic syndrome in black African young adults. They found that in males that metabolic syndrome score and HOMA insulin resistance were closely related to SCAT but not VAT. In females there were minimal significant relationships. The authors conclude that SCAT plays a significant role in black African males. They speculate that the failure to find relationships in females is due to the higher levels of SCAT that may represent a threshold effect.

Major compulsory revisions

1. The overall setting of the article is that there are differences between blacks and whites in how the metabolic syndrome develops. They cite a variety of references indicating that there is less VAT in blacks than weights in spite of greater frequency of insulin resistance and other cardiovascular risk factors in blacks. The article then implies that because they found a relationship between SCAT and metabolic syndrome components in men that maybe there are different affects in blacks than in whites. This conclusion is only inferred and not stated but the inference is limited because they did not study white subjects so they do not know what they would have found in similar studies in whites. The failure to study white subjects is the major limitation of this study and should be noted that it makes it uncertain as to whether this study really demonstrates any different phenomena in whites and blacks.

Minor essential revisions

2. Statistical significance indicators of differences between males and females should be placed in Table 1.

3. Line 168 the p value for the relationship between VAT and HOMA IR.

Discretionary revisions

4. In the supplementary table showing the relationships between insulin and the anthropometric measures the relationship are nearly identical to those with HOMA which is not surprising since a variety studies show that HOMA is essentially the same thing.
Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests’