Author's response to reviews

Title: Risk factors of metabolic syndrome among adult Sudanese sickle cell anemia patients

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Author's response to reviews:

Research article

Risk factors of metabolic syndrome among adult Sudanese sickle cell anemia patients

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Respond to Reviewer Dr Cordovil:

1. It was not clear whether the research was with all genotypes or only with the Hb SS genotype. In the title is SCA and throughout the SCD text. The authors should make clear when unlocking the title, in the text and in the tables that the genotypes were placed in the study.

All patients are Hb SS genotype as documented by hemoglobin electrophoresis. This have been added clearly in methodology section line 80-81.

2. In the reference session, it is necessary to standardize them. Review one by one, according to the journal guidelines.
All references were revised to ensure matching with the guideline

3. Review all references in the text. For example, in the discussion (line 163-166) the text talks about waist circumference but reference number 8 is related to a study of SCD in children. Check the references in the text.

We checked and add the right reference

4. The waist circumference has different patterns. In Brazil it is considered 94 cm for men and 80 cm for women. But you have put different references. that's right? Are the cut-point values you put in the latest international literature?

Yes they are. Since modified NCEP ATP III criteria suggested the cut-off points of waist circumference should be ethnic specific.

Respond to Reviewer Alauldeen Mudhafar Zubair:

1. Number of controls should be at least equal or more than number of cases. Why is the number of controls only 26 in your study? It is very easy to recruit healthy young people to this study and the study parameters are simple and easily available in every hospital laboratory. Please increase the number of controls.

Regarding the control we are looking for control with comparable BMI of the sickles to illuminate confounding. This limit the number eligible to be involved in the study. Obesity is pandemic and medical students are not an exception.
2. Define steady state for SCD.

Patients free of crises in the last 12 weeks. (This point added to study population in methodology section) Line 79.

3. There are many language errors which should be corrected.

We did our best to correct the language mistakes and improve the lay out.

4. Compare only cases to controls in figures 1-4. There is no point of comparing males to females among cases.

We removed the figure

5. Add conclusions section after discussion.

We added the section 249

6. Add estimation of the total risk of metabolic syndrome not just individual factors.

This is stated in the last row in table 5 line 328.

Our gratitude and appreciation to the reviewers; for their valuable comments and critics. And for the time and concern they dedicated to improve the article.
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