Author’s response to reviews

Title: Association of trace metal elements with lipid profiles in type 2 diabetes mellitus patients. a cross sectional study

Authors:

Amare Wolide (amaju2002@yahoo.com)
Belay Zawdie (bellzolla2000@gmail.com)
Tilahun Alemayehu (tilalemnig2012@gmail.com)
Samuel Tadesse (sami2tadi@gmail.com)

Version: 1 Date: 01 Jun 2017

Author’s response to reviews:

Point-by-point responses to the reviewer’s comments on the manuscript submitted to BMC Endocrine Disorders.

Title of the manuscript: Association of trace metal elements with lipid profiles in type 2 diabetes mellitus patients. Cross sectional study:

The authors would like to thank Reviewers for careful review of our manuscript and providing us with their comments and suggestion to improve the quality of the manuscript. We will do our best to revise all the grammatical errors of the manuscript. The following responses have been prepared to address all of the reviewers’ comments in a point –by-point fashion.

Reviewer “1”

Major Comments

1.“The study population is very heterogeneous, age, diabetes consequences and other parameters vary a lot. Please describe how subjects were selected and whether selection bias might play a role”.
Response: Selection bias might be there since we select study participants by consecutive sampling technique intentionally. Thus, this would be one of the critical limitation of the study.

2. “Table 1 also not mention diabetes duration in subject with diabetes”.

Response: Now it is revised as suggested

3. “The authors did not state a hypothesis; thus the statistical power of the findings remains unclear. Furthermore, problems of multiple testing apply and need to be checked by a statistician.”

Response: Now it is revised as suggested. The null hypothesis of the research was, there would be significant inverse relationship of trace metal elements and lipid profile of patients. After Bonferroni adjustments for multiple test, the significance level was reduced to 0.01. Bonferroni adjustments was done by the formula \( p \leq \alpha/n \) where \( \alpha \) is type I error, a significant difference (\( P<0.05 \)) and \( n \) is number independent tests performed.

4. The role of drug treatment is not mention for the group difference in trace element concentrations are unclear and cannot be extrapolated.

Response: We do understand antidiabetic medications might have some effect on trace metal elements homeostasis. However, it was not our objective in this study. In this study, all of our study subject were in antidiabetic treatment. Among insulin and oral hypoglycemic groups, no difference was observed in the blood concentration of trace metal elements except iron and manganese. For further, information we have provided below the table that show mean difference of trace metal elements among diabetic patient taking antidiabetic drugs.

5. Please discuss the outcome of this study what is importance in the patience managements.

Response: Different studies suggests that normal level of trace metal elements are important to make body metabolism more effective by activating and catalyzing enzymes. However, there deficiency or excess presence in the blood could result some metabolic disturbance that would result metabolic syndromes. Thus, in this study we aimed to disclose the relationship between of trace metal elements and lipid level among patients with diabetes and to encourage other researchers to exploit the area more with advanced technology to discover new options in diabetic treatments. It would also use to teach and create awareness about the role of trace metal elements in controlling of diabetes. This is a across sectional studied and we cannot recommend this and that for patient safety; but it will give same insight for the future plan to recommend or
not to recommend trace metal elements supplementation as possible means of correcting metabolic disorders along with other supportive findings.

6. Table 3.4, 5 can be merged its easy to compare all lipid parameter with trace element.

Response: Agreed and corrected as suggested

Reviewer “2”

Major Comments

1. In the abstract method part in the first sentence the reviewer commented as” Two hander fourteen? Probably the authors meant 214”

Response: Yes, it was just to say 214 and revised as per suggestions.

2. In the abstract method part in the third sentence, the reviewer commented as to “mention the trace elements studied.”

Response: Agreed and revised as per suggestions.

3. In the abstract result part in the fourth and eleventh sentence and in the entire manuscript the reviewer commented as to “change the word triacylglycerols to triglycerides”

Response: Agreed and revised as per suggestions.

4. The reviewer raised this question “Why are the 2 abstracts provided at the beginning of the manuscript and in the text, different? Please provide the same abstract everywhere”

Response: We are not clear with the questions. We want the reviewer to show as clearly his question. Which part is different from the rest?

5. The reviewer commented as to “change the results and conclusion sections according to the revisions suggested below”.
Response: Agreed and revised as per suggestions.

6. The reviewer questioned as “Why is history of pregnancy and lactation, one of the exclusion criteria? It should be mentioned as current pregnancy and lactation”.

Response: Agreed and it was to say current pregnancy and lactation.

7. The reviewer commented as to “mention the trace elements studied.”

Response: Agreed and revised as pre-suggestion

8. The reviewer questioned as “What do you mean by good laboratory practice? Please specify, as in: technicians, or laboratories involved, or quality control, etc”

Response: Agreed and it was just to mean we hired the right personals and conducted in the blood withdrawal, transport, serum separation, storage, and analysis; type of the reagent, controls, calibrators and machineries we used were up to dates. (Just to say careful and high emphasis has been given)

9. The reviewer commented to remove the reference ranges we used “There is no need to specify the normal or reference range for elements and lipid levels, as the authors just assessed the quantitative factors”

Response: Agreed and corrected as suggested.

10. In the result part, the reviewer has commented us “The authors should describe the demographic characteristics of the participants, referring the readers to other publications of the authors does not seem appropriate.

Response: Agreed and we added new table addressing this issue.

11. The reviewer suggested, as “There is no need to compare the findings in different age and gender groups, according to the title of the manuscript and objective of the study. The authors can assess the impact of age and gender on lipid levels in the linear regression analysis”.


Response: agreed and corrected pre suggestion.

12. Please change p-values: 0.000 to p-value<0.001.
Response: Agreed and corrected as suggested.

13. Tables 3, 4, 5 can be merged into a single table with columns Beta, and p-value, there is no need for the additional columns.
Response: Agreed and corrected as suggested.