Reviewer's report

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

Version: 0 Date: 29 Apr 2017

Reviewer: Lida Moghaddam-Banaem

Reviewer's report:

This manuscript is addressing a rather new and interesting approach to diabetes management, but needs extensive corrections before publication. The required revisions in different parts of the manuscript are:

- A thorough English language editing of the whole manuscript is needed.

Abstract:

- Two hander fourteen? Probably the authors meant 214?

- Please mention the trace elements studied.

- Please change triacylglycerols to triglycerides.

- Why are the 2 abstracts provided at the beginning of the manuscript and in the text, different?

Please provide the same abstract everywhere.

- Please change the results and conclusion sections according to the revisions suggested below.
Method:

- Why is history of pregnancy and lactation, one of the exclusion criteria? It should be mentioned as current pregnancy and lactation.

- Please mention the trace elements assessed.

- What do you mean by good laboratory practice? Please specify, as in: technicians, or laboratories involved, or quality control, etc.

- There is no need to specify the normal or reference range for elements and lipid levels, as the authors just assessed the quantitative factors.

Results:

- The authors should describe the demographic characteristics of the participants, referring the readers to other publications of the authors does not seem appropriate.

- 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.

- Please change p-values: 0.000 to p-value<0.001.

- 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.

- Other potentially effective factors on lipid levels, such as age, gender, BMI, and waist-hip ratio should be entered into linear regression model to make the results more valid.

Discussion:

- Naming the studies alone is not sufficient for discussing the findings. The results of the other relevant studies should be mentioned then compared with the present study.
The studies and related discussions about zinc, iron, and calcium are quite inadequate for any reasonable conclusion. The authors need to work much more on these parts of discussion.

Overall, the discussion is quite insufficient, and needs much more explanations.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Not suitable for publication unless extensively edited
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