Reviewer’s report

Title: Association of insulin, C-peptide and blood lipid patterns in patients with impaired glucose regulation

Version: 3 Date: 04 Jan 2019

Reviewer: Fernando Bril

Reviewer's report:

1- Lack of Novelty: If, as suggested by the authors, the aim of the study was to detect ethnic differences in insulin sensitivity, a different approach should have been implemented with a better ethnic characterization of the patients. A comparison between different ethnicities within the same study would have been ideal if possible. Authors did not address the ethnic factor in the discussion. How do their results compare to other studies assessing these factors in Caucasians, Hispanics, African Americans?

2- Grammar: Thank you for addressing this.

3- Lack of information on medications: thank you for adding this information. All patients with T2DM > 40 years should be taking a statin according to current guidelines. How do authors justify the lack of use of statins in their population? Is this a selected population of patients with T2DM? Due to the long half-life of long-acting insulins and some SU, what measures did the authors take to avoid any bias during the OGTT? When was insulin discontinued for the OGTT? What happened with patients with fasting plasma glucose levels over 250 before the OGTT? (the relationship between glucose and insulin is affected with hyperglycemia, and therefore any measurements of insulin resistance is incorrect at these levels).

4- More information regarding patient recruitment should be provided: Thank you for addressing this.

5- Use of a glucose-lowering agent does not appear described in the manuscript as a criterium for diabetes. This answer was unclear. My point is that if a patient was recruited already taking glucose-lowering medication and his/her OGTT was completely normal, the diagnosis of T2DM was based on prior use of T2DM medication (he was diagnosed at some point in the past, obviously, but authors may not know what criteria was used).

6- No information is provided regarding the methodologies used to measure insulin and c-peptide: Thank you for adding this information.

7- We calculated the Matsuda indices and added the new data to Table 1 in the revised manuscript. Thank you for addressing this.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

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.

Yes

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

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Please indicate the quality of language in the manuscript:

Acceptable

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