

Reviewer's report

Title: Indices of insulin sensitivity and secretion from a standard liquid meal test in subjects with type 2 diabetes, impaired and normal fasting glucose

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Reviewer: Chiara DallaMann

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General comments

The aim of the study is to provide a method to estimate insulin sensitivity and secretion indices derived from a standard liquid meal tolerance test. To this purpose they analyzed data of 19 NFG, 19 IFG and 35 type 2 diabetic subjects and calculated both area under the curve of glucose insulin and C-peptide and HOMA2-IR and Matsuda indices of insulin sensitivity. The manuscript is well written, however I honestly don't see the novelty of the study, since a lot of paper has been published in the last years which use the meal glucose tolerance test to assess insulin sensitivity and beta-cell function (see for example, Basu et al Diabetes 2006, Bock et al Diabetes 2006, ...but others can be easily found)

Specific comments

- 1) It is not clear why the authors used data from 0 to 120, even if samples at t=150, 180, 210 and 240 are available.
- 2) Calculating beta cell function from insulin and glucose data, instead of C-peptide and glucose data is not correct, since insulin concentration reflects not only the pancreatic secretion but also the hepatic extraction
- 3) Other methods are available to estimate beta-cell function from an oral test (e.g. Hovorka et al 2000, Mari et al 2002, Cretti et al..., Breda et al Diabetes 2001, etc). The author should compare their results with those obtained with other published methods.
- 4) Figure 4 should show also single subject data points, not only the regression line.

Minor comments

Page 11, line 8: correct 791 with 0.791