Reviewer's report

Title: Relationships between obesity, glycemic control, and cardiovascular risk factors: a pooled analysis of cross-sectional data from Spanish patients with type 2 diabetes in the preinsulin stage

Version: 3 Date: 27 May 2014

Reviewer: Irene Vinagre

Reviewer's report:

Major Compulsory Revisions:
- In the discussion it should be worthy to include some evidence about the relationship between BMI and dyslipidemia and hypertension in type 2 diabetic patients, mentioning a recent Spanish study (Gomis et al. Prevalence of type 2 diabetes mellitus in overweight or obese patients outpatients in Spain. OBEDIA Study. Med Clin (Barc). 2014 Jun 6;142(11):485-92. Epub 2013 May 15).

- In the second paragraph of the discussion, I recommend to extend the discussion about the inverse relationship between BMI and age or duration of T2D adding some information of the recent publication of Mata et al. about the catalan population. Moreover, this publication also reported a relationship between glycemic control and diabetes duration that should be included in the discussion (Mata-Cases et al., J Diabetes Metab 2014, 5:2. http://dx.doi.org/10.4172/2155-6156.1000338. Treatment of Hyperglycaemia in Type 2 Diabetic Patients in a Primary Care Population Database in a Mediterranean Area (Catalonia, Spain): “The mean HbA1c value increased slightly with longer diabetes duration, especially in patients treated with insulin alone or in combination with oral agents. There was a slight decrease in mean BMI in all groups of patients with longer diabetes duration, although changes were smaller in patients treated with insulin alone. However, the frequency of obesity remained high, around 40% to 55%, in all patients. Interestingly, clinical characteristics clearly differed between younger and older patients: patients under 55 years of age were more often smokers and considerably more obese. They also had higher mean HbA1c, but lesser complications”.

Minor Essential Revisions:
- Figure 1: The recommended goals are not well seen in the figure. I suggest to write them at the bottom of each chart, next to the legend.

Discretionary Revisions:
- Include “type 2 diabetic patients” in line 107 and 112 of Methods to better understand the kind of patients that are included in the study.

- Consider to add that a possible explanation for the higher BMI and worse
control of the cardiovascular risk factors in this study compared with the catalan population is that the patients included in this study are younger than in the previous one (lines 244-247).

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

- I have received lecture fees from Eli Lilly in the last five years.