Reviewer’s report

Title: Lower Risk of Hypoglycaemia and Greater Odds for Weight Loss with Initiation of Insulin Detemir Compared with Insulin Glargine in Turkish Patients with Type 2 Diabetes: local results of a multinational observational study

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Reviewer: Michelangela Barbieri

Reviewer’s report:

Taner Damci et al evaluated the effectiveness of insulin initiation with either insulin detemir (IDet) or with insulin glargine (IGlar) in real-life clinical practice in Turkish patients with type 2 diabetes mellitus (T2DM). Authors concluded that initiation of basal insulin analogues, IDet and IGlar, were both associated with clinically significant glycaemic improvements. Indeed, a lower risk of minor hypoglycaemia, and greater odds of weight loss #1kg, was observed with IDet compared with IGlar.

The study is interestingly and adequately conducted. Indeed I have several major concerns.

Major Compulsory Revisions

1. The major flaw of the manuscript concern the statistical analysis and the congruency of results. In Figure 1a and figure 1c error bars, indicating 95% confidence intervals, are not statistically compatible with the p values reported. Odd ratio, 95% confidence intervals and p value should be accurately revised and reported in the figures.

2. The definition of major and minor hypoglycaemia is not clear. How the number of weeks (4 weeks for minor and 12 weeks for major hypoglycemia events) preceding the follow up visit could define the severity of hypoglycaemia?

3. As stated by the authors other studies have previously compared insulin detemir and insulin glargine and an observational study with all related limitations does not provide any new incremental advance compared to a randomized, controlled clinical trial.

4. Authors stated: “Patients were recruited into the study after they were deemed to be candidates for once-daily insulin detemir or once-daily insulin glargine as add on therapies to OADs based on the decision of the study physician according to local clinical practice” and more “....... there is a lack of a uniform consensus as to which of the two available basal analogue insulin should be recommended to initiate insulin treatment and what the potential differences are, if any, in patients with T2DM” . Indeed, the local clinical practice of the population investigated show an uniform consensus for detemir treatment. How the authors could explain the high difference in number of patients assigned to detemir
therapy (n=2395) compared to glargine therapy (n=491)?

5. The more sensitive analysis evaluating the independent effect of insulin type on final HbA1c is superfluous being the simpler model already not significant.

Minor concerns.

1. Baseline and post treatment values should be reported in one table.

2. All parameters included in each models should indicated in figure legend and trough result section.

Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests' below