Reviewer’s report

Title: Patterns and trends of utilization of incretin-based medicines between 2008 and 2014 in three Italian geographic areas

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Reviewer: Angelo Avogaro

Reviewer's report:

Roberto and colleagues describe the RW patterns and trends of utilization of GLP1a and DDP4i through the analysis of routinely collected administrative data from three Italian geographic areas. Their major findings were that Incidence of use increased between 2008 and 2011 increased and slightly decreased thereafter. In 2014, 61% of new GLP1a users received liraglutide while 52% of new DPP4i users received metformin/DPP4i in fixed-dose. The percentage of new DPP4i users older than 65 years of age increased from 30.9 to 62.6% during the study period. Roughly 12% of new users had not received any antidiabetic before starting an incretin.

Comments.

The analysis presented in the ms. is not new: it simply confirms the under-use of incretin-based therapies by Italian diabetologists. The reasons for this under prescription are several and the present analysis faithfully depict the situation. However the analysis is outdated since it does not include the fact that more DPP-4 inhibitor such as linagliptin and alogliptin are available but they were not included in the analysis: this is of importance since lina has been one of the most prescribed DPP4-I, lately, in Italy. Germaine to this is the fact that also the landscape of GLP-1RA is changed since exenatide is now available QW as well as dulaQW is also available. Furthermore, also SGLT2-I are available and they compete with both DPP-4-I and GLP-1RA, but obviously, they were not included in the present analysis. Therefore this report appears generally outdated.

Another point that deserved attention is that one would like to know whether the change in prescription attitude for incretin has been simultaneously followed to a decreased propensity to prescribe SU. This should be shown.

Finally I am impressed by the 12% of new incretin users without any prior antidiabetic prescription: this is determined by under-reported diabetes? Or because patients were buying generic metformin without prescription?

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.

No

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?
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Not relevant to this manuscript

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