Reviewer's report

Title: Predictors of vascular complications among type II diabetes mellitus patients at University of Gondar Referral Hospital: a retrospective follow-up study.

Version: 0 Date: 15 Feb 2018

Reviewer: CHII-MIN HWU

Reviewer's report:

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Manuscript Number: BEND-D-18-00039

Title: Predictors of vascular complications among type II diabetes mellitus patients at University of Gondar Referral Hospital: a retrospective follow-up study.

The investigators retrospectively collected data from 341 newly diagnosed type 2 DM patients to estimate incidence and predictors of vascular complication among these patients. The median of follow-up was 81.5 months. The authors reported that the incidence rate of any vascular complication, including retinopathy, nephropathy, neuropathy, stroke, peripheral arterial disease and coronary heart disease, was 40.6 cases/1000 person years of observation. The significant predictors for any vascular complication were male sex, having hypertension at baseline, positive protein urea at baseline, low HDL-C, high LDL-C and high triglyceride level. Although the study topic is important, the findings of this study are not novel. Many risk factors of diabetic vascular complications have been reported earlier. The investigators could have bias on data interpretation because they knew the outcome of the subjects. The manuscript cannot be recommended for publication in the Journal due to lack of novelty and other study limitations.
Major suggestions:
1. The major limit of the study is its study design. Data were collected after the primary outcome having already been detected. Many of the sources of sample distortion bias are hidden. Any systemic difference in ascertainment of outcome will result in a biased sample. For example, the authors did not explain exactly how they ascertained the study patients. We also do not known inclusion and exclusion criteria for data registry. We require information about building the study dataset. Unfortunately, the investigators did not provide it in the present manuscript.
2. I am confused by the primary outcome of this study. Mixing occurrence of micro- and macro-vascular complications into a composite endpoint seems to acknowledge that all vascular complications occurred in these patients were attribute to DM, which might not always be the case.
3. As stated by the authors in the Discussion, the current composite endpoint would overestimate diabetic vascular complication rate in patients with diabetes. In this study, the incidence rate of any vascular complication in these newly-diagnosed patients was 4% a year, which is higher than results from other studies. I wish the investigators could present results of individual component of the outcome, not just the composite outcome as a whole.
4. The present study only included data from patients from a single hospital. The subject number is not large enough to conclude anything generalize to general patient population.

Minor suggestion:
1. Please use the term "type 2 diabetes mellitus" instead of "type II diabetes mellitus".

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.
No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.
Unable to assess
Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.
No

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