Reviewer’s report

Title: Association between glycosylated hemoglobin A1c and bone biochemical markers in type 2 diabetic postmenopausal women: a cross-sectional study

Version: 1 Date: 06 Dec 2018

Reviewer: Makiko Ogata

Reviewer's report:

Thank you for revision of your manuscript according to our comments. While not entirely novel, this result extends our understanding of the relation of bone turnover marker and diabetes. Thus, several points as indicated below need to be addressed by authors to improve the quality of the article.

Major points

1. There are still some points about the inclusion criteria that are unclear. It is necessary to describe characteristics of the control subjects in terms of blood glucose and HbA1c levels as well as presence of any other diseases at the time of hospital visit. Many diseases affect bone turnover marker; therefore, the control subjects must be healthy. There was no description as to whether the control subjects visited the hospital only for a health examination. A table that includes general examination data of the control subjects is needed.

The recruitment criteria for diabetes patients does not describe whether they excluded patients with renal dysfunction including diabetic nephropathy, patients consuming vitamin D, and patients with a history of severe macroangiopathy. These diseases have been reported to have a relation with osteoporosis. Patients with macroproteinuria or severe macroangiopathy, such as cerebrovascular and cardiovascular diseases, must be excluded from statistical analysis. The markers studied are possibly affected by renal function, and therefore, patients with renal dysfunction must be excluded.

Data of microangiopathy and macroangiopathy grade are also needed. The yes/no statistical analysis must not use such a high equivalence for these complications.

This study uses hospital-based data and did not include a large number of subjects; thus, the criteria for recruitment must be strict.

2. The study conclusion mentioned in the Discussion section is not supported by the results that they have reported. At least parathyroid hormone (PTH) and vitamin D levels should not be discussed without exclusion of patients consuming natural or activated vitamin D. The authors appear to overextend their interpretation throughout the manuscript.
3. Although the authors described that the characteristics of diabetes patients were stratified according to an HbA1c level of 8.5%, they stratified the data according to an HbA1c level of 7.4% during statistical analysis. These differences must be explained with respect to statistical necessity.

Minor point

1. Statin medication also affects bone metabolism; therefore, use of statin medication in subjects should be evaluated. Statin has been reported to prevent osteoporosis. Although dyslipidemia-related data were included in the analysis, there was no data of subjects with regards to use of statin medication.

2. Past history of fracture by trauma or nontrauma must be divided.

**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.

No

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

**Quality of written English**
Please indicate the quality of language in the manuscript:

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