**Reviewer’s report**

**Title:** An in-depth analysis of glycosylated haemoglobin level, body mass index and left ventricular diastolic dysfunction in patients with type 2 diabetes

**Version:** 0  **Date:** 27 May 2019

**Reviewer:** Rayaz Malik

**Reviewer’s report:**

This is a large study attempting to establish the association between HbA1c and diastolic dysfunction. As such the data are robust.

However, the analysis and hence conclusions are flawed.

This is based on:

1. The use of a single HbA1c measure, which does not reflect the historical impact of hyperglycemia on diastolic dysfunction. I would therefore recommend reanalysis using a cumulative HbA1c.

2. The study of a group of patients with T2DM who are on different therapies not just for their glucose, but also for lipids and BP, which will undoubtedly impact on the echocardiographic findings.

3. Exclusion of patients without CAD and EF >50%, leaves a cohort of patients who are atypical of typical T2DM.

4. Was the echocardiographic assessment of diastolic dysfunction standardized?

5. Was there any relationship to the severity of diastolic dysfunction (I=<0.8, II= 0.8-1.5, III= >2).

6. What was the impact of lipids or BP?

7. The English and grammar need significant improvement: What does compressively denote in 'In this investigation, we had compressively analyzed the relationships among BMI….'

8. These data challenge recent detailed CMR studies showing a link between diastolic dysfunction and glycemia (Clarke et al Endocrinol Diabetes Metab. 2018 Apr 6;1(2):e00014).
9. What treatments were these patients on? Given the potential benefits of the newer agents like GLP-1 agonists and SGLT2i on diastolic dysfunction (Tanaka et al Heart Fail Rev. 2018 May;23(3):439-444).

10. The eGFR is remarkably high for a group of T2DM patients aged 57.

**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:

Needs some language corrections before being published

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