Reviewer’s report

Title: Association between 24-hour blood pressure variability and chronic kidney disease: A cross-sectional analysis of African Americans participating in the Jackson Heart Study

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Reviewer: martino pengo

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Tanner et al present here a cross-sectional study on a large observational cohort of afro american patients to assess the impact of short term BPV on chronic kidney disease.

They included in the analysis 1,022 patients and they found that patients with CKD exhibit a greater short term BPV when compared with patients without CKD. However this difference is less evident when data are adjusted for common determinants of BPV.

It is an interesting analysis that reinforce the hypothesis that BPV may be a marker and a possible risk factor for BPV. I have some comments that I have highlighted below.

Major Compulsory Revisions

BPV is rather a wide concept that depends on the time range considered. Authors must be more precise when they state that ‘CKD is associated with higher BP variability’.

24h BPV is commonly considered the short term BPV as it differs for example from the long term BPV calculated on a visit-to-visit basis. This needs to be clarified both in the methods and discussion sections.

How did the authors chose the determinants for the multivariate analysis? Did they adopt the determinants which were significantly associated with the outcome parameters in the univariate analysis?

Also I assume the variables are normally distributed?

The authors did consider only SD and ARV as BPV parameters. However it would be important to try to better describe BPV adding other parameters for example dipping status.

Minor Essential Revisions

Supplemental Table 2 is rather difficult to interpret. I don't see the p value for the t statistic tests.
Do the authors have any data on the type of BP lowering medications? It would be interesting to know if a specific class of ant hypertensives is associated with lower BPV in patients with CKD

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests