
To the Editor:

We read with great interest the article by Johansson et al., which reports that greater variabilities of home blood pressure (BP) and heart rate during 7 consecutive days were significant predictors of cardiovascular events, even after adjustments for age and mean home BP level. In addition, the morning day-by-day home BP variability was a stronger predictor of cardiovascular events than the evening day-by-day home BP variability. These results are very important in daily practice, because the assessment of home BP variability might be more cost-effective and more feasible for repeated assessment in the long-term follow-up of hypertensive patients than both office and ambulatory BP variability. Further studies are needed to investigate the effects of treatment-induced changes in home BP variabilities on target organ damages and cardiovascular events. We have several comments on this article.

First, they did not report the prognostic value of the maximum home systolic BP (SBP) or the peak size in home SBP (maximum home SBP – mean home SBP), which were reported to be significantly associated with target organ damages in hypertension. It is of great interest to compare these indices with other indices of home BP variabilities in the prediction of cardiovascular events.

Second, the clinical significance of morning-evening home BP variability remains unclear, and they did not report the prognostic value of morning-evening difference in home BP, which was an independent determinant of cardiac damage in untreated hypertensive patients. Third, it would be of interest to show whether the prognostic value of day-by-day home BP variability might differ when compared during 3, 5, and 7 days of home BP measurements. Even when the visit-to-visit office BP variability was estimated using BPs at only 3 time points, this variability had significant prognostic value. Fourth, in the present study, the home diastolic BP variabilities were stronger predictors of cardiovascular events than the home SBP variabilities, although the mean age of study subjects was 56.4 years. The authors did not discuss this issue.

Finally, the cardiovascular risk of greater home BP variability might be explained by the severity of sleep apnea, because the authors reported that self-reported sleep disorders were significantly associated with greater variability in home BP.

Disclosures

None.

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