

Nighttime Blood Pressure Predicts 10-Year Mortality

Daytime or clinic BP readings were not as good, and white-coat hypertension did not confer excess risk.

Twenty-four-hour ambulatory blood pressure (BP) appears to predict health outcomes more accurately than does clinic BP, but studies have been limited in size. In this study, researchers analyzed data from a Spanish BP registry of 59,000 patients who met European guideline indications for ambulatory BP monitoring (i.e., suspected white-coat hypertension, resistant hypertension, assessment of drug efficacy, labile or borderline hypertension). They were followed for an average of 10 years after standard clinic and ambulatory BP monitoring at baseline. Key findings were as follows:

- Systolic BP (SBP) generally was associated more strongly with all-cause and cardiovascular-related mortality than was diastolic BP.
- 24-hour ambulatory SBP was associated more strongly with all-cause and cardiovascular-related mortality than was clinic SBP.
- Nighttime SBP (measured during ambulatory monitoring) was associated more strongly with all-cause and cardiovascular-related mortality than was daytime SBP.
- Compared with patients who had normal BP, those with masked hypertension (hypertension on 24-hour ambulatory but not clinic measurement) were at excess risk for all-cause mortality, whereas those with white-coat hypertension were not.

COMMENT

This study confirms the prognostic value of 24-hour ambulatory BP measurement (and particularly overnight measurement) in a large, but selected, patient population. Limited availability, variable insurance coverage, and variable acceptability to patients can be barriers to use of ambulatory monitoring in the U.S. Whether extensive use of 24-hour ambulatory monitoring for diagnosis and treatment would improve clinical outcomes — compared with a combination of office measurements and self-measurements at home — remains unclear. — **Bruce Soloway, MD**

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