Why Is Nondipping in Ambulatory Blood Pressure Monitoring Not Prognostic in Poor Sleepers?

To the Editor:

In another analysis of the Progetto Ipertensione Umbria Monitoraggio Ambulatoriale cohort, Verdecchia et al demonstrated that nighttime blood pressure (BP) was higher in poor sleepers and that, in this subset of participants, the incidence of cardiovascular events did not differ between dippers and nondippers. Poor sleep quality was a plausible reason presented by the authors to explain the higher nightly BP in poor sleepers, but they did not offer a consistent explanation for the loss of prognostic importance of the nondipping behavior. We have demonstrated recently that the influence of ambulator BP monitoring on sleep quality may be detected even in patients who did not report influence of monitoring on the quality of sleeping. During awakenings >15 seconds, detected by electroencephalogram, systolic and diastolic nighttime BP were 5 mm Hg higher than BP measured in electrographic sleep. These are exactly the figures obtained by Verdecchia et al indicating that poor sleepers may have awakened during most measurements rather than actually being nondippers.

Another complementary or alternative explanation for the absence of prognostic significance of the nondipping status in poor sleepers may be offered by the study of Kripke et al. In a cohort of 1.1 million volunteers participating in the Cancer Prevention Study II, they demonstrated that insomniacs may have a lower mortality rate than noninsomniacs, a finding that is in agreement with the lower incidence of cardiovascular events in individuals of the Progetto Ipertensione Umbria Monitoraggio Ambulatoriale cohort who reported poor sleep.

Taking together, these studies show that the prognostic importance of abnormalities occurring during sleep are complex and cannot be captured by analyses of isolated components. We believe that cohort studies with simultaneous baseline evaluation of sleep quality, sleep-disordered breathing, and BP behavior are warranted.

Disclosures

None.

Denis Martinez
Flávio Danni Fuchs
Division of Cardiology
Hospital de Clínicas de Porto Alegre
Universidade Federal do Rio Grande do Sul
Porto Alegre, RS, Brazil


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Denis Martinez and Flávio Danni Fuchs

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