Timing of Antihypertensive Therapy and Circadian Blood Pressure Pattern

To the Editor:

We read with great interest the recent article by de la Sierra et al. about the prevalence and factors associated with circadian blood pressure patterns in a huge population of 42,947 hypertensive patients studied with 24-hour ambulatory blood pressure monitoring.

Their cross-sectional study shows an association between nondipper or riser patterns and the use of more antihypertensive drugs, higher cardiovascular risk, or increased prevalence of target organ damage, which is consistent with previous articles. Of note, the authors also found that nondipping was not associated with the timing of administration of antihypertensive treatment. Therefore, the article may suggest that it does not matter at what time antihypertensive drugs are taken. Nevertheless, several previous studies have observed that the administration of nondiuretic antihypertensive drugs at bedtime can improve blood pressure control and restore the dipping pattern in a substantial number of patients with refractory or resistant hypertension. To disclose possible bias, it would be interesting to know why patients in this large observational study were given their medication in the morning or at night, because other noncontrolled variables could have influenced the decision to prescribe antihypertensive medications at bedtime in this cohort, eg, previous high blood pressure levels or result of a previous 24-hour ambulatory blood pressure monitoring.

In our opinion, the key point about circadian blood pressure patterns is whether a blunted nocturnal blood pressure dip is merely a marker of high cardiovascular risk, as de la Sierra et al suggest, or, in contrast, whether interventions aimed to restore a dipping profile using a chronotherapy approach, which means giving most of the antihypertensive medications at night, could further decrease cardiovascular risk. We believe that the question is still open.

Disclosures

None.

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