Daytime sleeping and night-time urinating obscure normal dipping

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An 82-year-old hypertensive woman underwent 24 h ambulatory blood pressure monitoring. Her systolic blood pressure, diastolic blood pressure and heart rate are plotted in Figure 1 (please see the online-supplement colour version). As recorded in the subject’s personal log, Figure 2, a daytime nap and three night-time arousals are delineated in the chart. This subject’s sleep-associated blood pressure dipping is graphically apparent. However, when daytime and night-time are arbitrarily defined as 07:00–23:00 and...
23:00–07:00, this woman is considered a non-dipper; night-time/daytime SBP = 0.97, night-time/daytime DBP = 0.9. Alternatively, if her sleeping behaviour is taken into account, and the blood pressure profile is analysed according to actual sleeping time, the corresponding ratios are 0.88 and 0.79, respectively. Hence, she is indeed a dipper. In order to accurately and reproducibly determine dipping status, analysis should account for sleeping behaviour, namely, daytime naps should be analysed with night-time data, while night-time arousals should be computed with daytime measurements [1].

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References