

Characteristics and Determinants of the Dipping Phenomenon

A. Saint-Remy, M. Moonen, G. Rorive

Nephrology-Hypertension Unit, University Hospitalier Bât 35, 4000 Liège, Belgium

The aims of the present study were to characterize the dipping of BP in treated and untreated patients and to identify among different 24 h ABPM parameters which one could determine the amplitude of the dipping. ABPM (Spacelabs 90207) has been performed on 68 unselected patients (42 patients treated by antihypertensive drugs, 26 untreated). Dipping is expressed by the formula (%): (daytime BPBP)/daytime BP and by its absolute value (mmHg). Dipping is called "theoretical" when calculated with standard time references: 07; 22 and "real" when calculated according to true awake and asleep periods of the patient.

Results: in both untreated and treated patients, the theoretical dipping does not differ from the real one. The dipping is significantly higher for DBP than SBP ($p < 0.0001$). Treated and untreated women exhibit a higher dipping of DBP than men (men $p = 0.03$). Age is not related to dipping in none of the subgroups (treated, untreated, men or women). The amplitude of the dipping is unrelated to daytime BP, BP load and variability of BP as well. But a very significant negative relation is observed between the dipping of SBP and DBP and the 24 h SBP and DBP in treated dippers ($p = 0.003$ and $p = 0.004$).

Conclusions: our results show that the dipping is higher for diastolic than systolic BP. This is true for treated and untreated patients. Treated or untreated women have a higher nocturnal fall of DBP than men. Age, BP load and variability are not predictors of dipping. The 24 h SBP and DBP determine the dipping in treated studies. The clinical significance of these observations for the prognosis and treatment of hypertension should be evaluated in long term studies.

Variability