



POSTER

Importance of sleep-time ambulatory blood pressure and pulse wave velocity as marker of stroke

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Abstract

Introduction: Elevated blood pressure (BP) is a major risk factor for stroke and other cardiovascular and metabolic events. Many prospective ambulatory blood pressure monitoring (ABPM) studies demonstrate that elevated sleep-time BP constitutes a significant cardiovascular disease risk factor independent of the daytime ABPM or ambulatory awake and 24 h BP mean values. The aim of this study was to evaluate if these parameters were different before stroke (STK) in hypertensive patients compared to patients without stroke.

Methods: Patients admitted with stroke (WS), and who performed an ambulatory blood pressure measuring (ABPM) and pulse wave velocity (PWV) in the six months prior to stroke were compared with hypertensive patients without events (WOS). The 90207 monitor Spacelab was used for ABPM. PWV was evaluated with sphygmocor system. We used models of chi-square and t-student and it was considered significant values of $p < 0.01$.

Results: The two groups of 50 patients had similar age, sex, risk factors, office blood pressure, and day ambulatory blood pressure. We found that night systolic (WS 116.9+10.6 vs WOS 104.8+11.2, $p < 0.01$), diastolic (WS 71.3+7.1 vs WOS 66.8+8.4, $p < 0.01$) and pulse pressure (WS 46.2+8.1 vs WOS 52.7+9.8, $p < 0.01$) pulse wave velocity (WS 18.9 + 4.4 and WOS 13.7 + 5.3, $p < 0.01$) and augmentation index (WS 22.3 + 12.7 vs WOS 30.2 + 11.8, $p < 0.01$) are different in the two groups. We also detect a significant difference between both groups in % of dipper patients (WS 64% vs WOS 44%, $p < 0.01$).

Conclusion: Hypertensive patients with stroke had higher night-time blood pressure than non-stroke patients and had more vascular damage measured by PWV and AI, independent of other common risk factors for stroke.

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