PP-034  
Circadian Blood Pressure (CBP) Alterations and Other Etiological Risk Factors in Patients with Lacunar Infarction

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Background: Although the occurrence of lacunar infarction is closely related to arterial hypertension. The possible pathogenetic role of circadian blood pressure changes is controversial. This study was designed to evaluate the relationship between circadian blood pressure changes and occurrence of lacunar infarct in respect of other possible risk factors.

Methods and Patients: Patients, older than 50 years old who were admitted to our clinic were evaluated to detect the circadian blood pressure pattern, occurrence of lacunar infarct and other risk factors. Twenty-nine patients with lacunar infarct and 29 controls were included into the study consecutively between 2011-2013 years. Detailed information and neurological examination were done. Ambulatory 24-hour noninvasive blood pressure measurements, electrocardiography, laboratory examinations (biochemical and hematological parameters) were performed. Carotid and vertebral system Doppler investigational and magnetic resonance imaging or computed tomography was done for each patient. Variation in systolic and diastolic blood pressure was defined as the difference between night and daytime.

Results: Patients with lacunar infarct was significantly older and showed more often a history of arterial hypertension (p<0.02). Daytime and nighttime blood pressure values were significantly greater than controls (p<0.01). A reduced circadian blood pressure variation due to increased nighttime values was found different from controls. In the logistic regression analysis, a reduced systolic circadian blood pressure variation (p<0.01, OR: 15.1 95% CI, 4.2-54.5), age (p:0.03 OR, 1.01; 95% CI, 1.01-1.19), history of hypertension (p:0.001 OR, 4.84; 95% CI, 1.47-15.97) and nighttime systolic blood pressure values (p<0.001 OR, 1.11, 95% CI, 1.05-1.17) were found to be determinants of lacunar infarction.

Conclusion: Reduced systolic circadian blood pressure variation may be an important factor for the occurrence of lacunar infarction besides age and history of hypertension.

PP-036  
Evaluation of Arterial Stiffness and Hemodynamics by Oscillometric Method in Patients with Systemic Sclerosis

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Objectives: Arterial stiffness and its hemodynamic consequences are associated with adverse cardiovascular events. Pulse wave velocity and augmentation index are non-invasive markers of arterial stiffness. Systemic sclerosis (SSc) is a systemic, autoimmune disease affecting mainly small vessels. The aim of this study was to evaluate the arterial stiffness parameters and hemodynamics by oscillometric method in patients with SSc.

Methods: Thirty-five consecutive patients with diagnosed SSc and 35 age- and sex-matched healthy controls were included in the study. Measurements of arterial stiffness were carried out by using a Mobil-O-Graph arteriograph system that detected signals from the brachial artery.

Results: While hemodynamic parameters were not statistically significant between SSc and control groups, heart rate was significantly higher in SSc group (84±12 beat/min and 72±7 beat/min, p=0.001). SSc patients had significantly higher augmentation index and pulse wave velocity values compared to controls (27.9±12.4% versus 21.0±11.4%, p=0.019 and 6.5±1.5 m/s versus 5.04±1.7 m/s, p<0.001, respectively) (Figure 1). PWV was significantly associated with SSc when adjusted by heart rate (p=0.001, odds ratio: 17.304, 95% confidence interval: 3.225 – 92.832).

Conclusions: Pulse wave velocity and augmentation index were significantly higher in patients with SSc. Measurement of arterial stiffness parameters using oscillometric method was reliable, reproducible and, easy in patients with SSc.