Poster Session 19 - Imaging Procedures & Ultrasound Techniques

PS19/WED/06 - The relationship between ambulatory monitoring blood pressure and carotid intima-media thickness in hipertensive patientes

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Objectives: To assess association of blood pressure measurement by ambulatory monitoring blood pressure (AMBP), circadian pattern and carotid intima-media thickness (IMT).

Methods:

Design: cross-sectional study.

Subjects and setting: We included 278 hypertensive patients from a primary care research unit. Women 45.7%,aged 59.88 years.

Measurements: Age, sex, Ambulatory Monitoring Blood Pressure, circadian pattern and pulse pressure. By ultrasound Sonosite with software Sonocalt measuring the intima-media thickness(IMT) with protocol of 12 measurements, 6 in each carotid using mean values and mean maximum values found in each measurement. We considered pathological with European society of hypertension 2007 criteria: IMT mean >9 mm or existence of plaque.

Results: Blood pressure with AMBP was: BP 24hours:123.07/76.32, BP Activity: 126.83/77.77 and BP awake:112.83/66.97 mmHg. Circadian pattern was: 46.4% Dipper, 36.3% Non-dipper, 11.2% Extreme dipper and 6.1% Riser.

IMT mean value was 0.765 mm and mean maximum 0.943 mm, with statistics difference between circadian patrons, Riser was the highest (0.841 mm) and extreme dipper the lowest (0.737 mm)(P<0.05). 46(16,5%)patients had criteria target organ damage without difference between patterns but systolic blood pressure(SBP) was higher and diastolic blood pressure(DBP) lower than healthy (p<0.05).

We found positive correlation (p<0.05) between mean and maximum IMT with SBP24 hours (r=0.267,r=0.261), SBP day (r= 0.238,r=0.232), SBP night (r=0.289,r=0.278) and pulse pressure (r=0.389, r=0.381)and negative correlation with DBP24 hours and daytime (r=-0.186,r=-0.214).

Conclusions: Carotid Intima-media thickness correlates positively with systolic blood pressure in day, night, 24 hours and pulse pressure and negatively with diastolic blood pressure. Riser pattern is associated with intima-media thickness higher and extreme dipper lower.