P157: AORTIC CALCIFICATIONS AND INFLAMMATION ARE ASSOCIATED WITH IN-HOSPITAL COMPLICATIONS IN ACUTE CORONARY SYNDROME

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Objective: Cardiotid-femoral Pulse Wave velocity (cfPWV), the gold standard for measuring stiffness, is a marker of organ damage (OLD). Even though cfPWV correlates with casual (BPc), central (CBP) and ambulatory (ABPM) blood pressure (BP), evidence is limited for resistant hypertension (RH).

Method: Thirty-three patients (age, 56.1 ± 8.2 years; weight, 78.0 ± 12.4 kg; height, 1.62 ± 0.08 m) with RH participated in a cross-sectional study. Outcomes included clinical data, BPc, ABPM, and carotid-femoral, cfPWV. Correlation analysis was conducted to assess the association between variables; independent t-tests were conducted to compare variables between those patients with cfPWV <10 m/s and ≥10 m/s.

Results: Patients (20 women and 13 men) presented a peripheral systolic and diastolic BPC of 144.0 ± 3.8 mmHg and 82.0 ± 1.9 mmHg, respectively. The cfPWV correlated with age (r = 0.356, p = 0.045), 24 h systolic BP (24h SBP) nighttime pulse pressure (night PP), 24 h pulse pressure (24hPP), casual systolic (BPc) and diastolic BP (BPc), central systolic (CBP), diastolic (CBDP) and central pulse pressure (CPP); controlled for age the correlation SBP) nighttime pulse pressure (night PP), 24 h pulse pressure (24hPP), casual systolic (BPc) and diastolic BP (BPc), central systolic (CBP), diastolic (CBDP) and central pulse pressure (CPP); controlled for age the correlation remained significant for 24h SBP (r = 0.446, p = 0.009) 24hPP (r = 0.464, p = 0.007), nightPP (r = 0.365, p = 0.036), SBPc (r = 0.620, p < 0.001), DBPc (r = 0.488, p = 0.004), PPc (r = 0.592, p < 0.001), central SBP (r = 0.587, p < 0.001), central DBP (r = 0.487, p = 0.001) and central PP (r = 0.506, p = 0.003). Patients with lower values of cfPWV (n = 26) showed lower SBP (142.8 ± 15.9 vs. 162.6 ± 30.9 mmHg; p = 0.025), central SBP (136.0 ± 15.7 vs. 154.1 ± 31.8 mmHg; p = 0.041) and PP (49.6 ± 9.5 vs. 60.9 ± 20.8 mmHg; p = 0.043) than patients with cfPWV >10 m/s (n = 7).

Conclusion: Our study found several determinants of PWV in children, some with weight in males (p < 0.05) and with weight in males (p < 0.05). Major predictors for PWV in a multivariate regression analysis were gender, weight, systolic blood pressure, heart rate and body mass index.

Conclusion: Our study found several determinants of PWV in children, some of them modifiable and interfering with cardiovascular outcomes. Future research may provide clarity to the association between PWV in children and cardiovascular events in adulthood.

Background: Ankylosing spondylitis (AS) is a chronic, inflammatory disease of the axial spine that can manifest with various clinical signs and symptoms. Cardio-ankle vascular index (CAVI), which is calculated based on the stiffness parameter thus obtained, is theoretically independent of changes in blood pressure. With this distinct advantage, CAVI has been widely applied clinically to assess arterial stiffness in subjects with or without known cardiovascular diseases.

Objectives: The aim of this study was to evaluate the Cardio Ankle Vascular Index (CAVI) in subjects with ankylosing spondylitis paired with controls free of morbidities.

Methods: We enrolled 41 participants in this study. Eighteen patients with diagnosed AS and 23 controls free of comorbidities. CAVI was measured by VaSera VS-1000 (Fukuda- Denshi Company, Ltd, Tokyo, Japan).

Results: The results are expressed as mean ± standard deviation for continuous variables. The data were analyzed using SPSS v. 24 (SPSS Inc., Chicago, IL). The normality of the data was evaluated with Shapiro-Wilk test. A two-tailed p < 0.05 was considered statistically significant. Individuals with AS exhibited greater pSBP (p < 0.01), DBP (p < 0.05), and MBP (p < 0.01) compared to controls. Moreover, in the AS group we observed a higher CAVI with a mean difference of 1.14 (p < 0.01, 95% CI of .41 to 1.8) (Figure 1).

Conclusion: AS is a chronic inflammatory disease that primarily affects the articular joints of the spine. Individuals with ankylosing spondylitis showed increased CAVI, this contributes to explain the higher risk of cardiovascular disease in this pathological condition.
Pulse wave velocity (PWV) is gold standard for assessing arterial stiffness. Studies have shown that people with metabolic syndrome have insulin resistance and that after the onset of diabetes, cardiovascular risk is intensely increased, high-sensitive C-reactive protein (hsCRP) (1). Relate influence of changes in pulse wave velocity in the severity of the inflammatory state (2). Methods: A population-based cross-sectional study representative of a neighborhood of Salvador-BA, Brazil. The overall sample is randomized in adults from the assigned area, from December 2016 to May 2018 comprise 64 people. PWV was the measuring velocity between the carotid and right femoral wave. The flattening tonometer Sphygmocor apparatus (XCEL, ATCo Medical, Australia). Blood samples were collected to biochemistry analysis, ADVIA1800 (SiemensHealthcare Japan/Canada). The committee for research FTC protocol (No1827621). Spearman’s linear correlation coefficient between the laboratory tests and adjusted PWV were stratified according to the increased risk level of adjusted PWV. STATA v.12 for data analysis. The level of statistical significance was set at 5%.

Results: Table 1 (image 1), predominance of women (72.3%), (n = 64). When compared to the group with normal pulse wave velocity, there was an increase in the parameters of the laboratory tests in the group with an increased risk of arterial stiffness (adjusted PWV ≥ 10), the correlations in this group and the PWV were positive and weak, except for the glycemia was negative, but they were not statistically significant. Already in the group with normal PWV, the correlations were positive and weak, only triglycerides presented. Conclusion: New molecular markers is necessary for correlate low intensity inflammation and arterial stiffness.

References