P155: DETERMINANTS OF PULSE WAVE VELOCITY IN CHILDREN

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Objective: Carotid-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). The cfPWV correlated with age (r = 0.487, p < 0.001), central systolic (CSBP), diastolic blood pressure and heart rate in males and females (p < 0.05), and PP (49.6 ± 8.2 mmHg, respectively. The cfPWV correlated with age (r = 0.365, p = 0.045), 24 h systolic BP (24h SBP) nighttime pressure (night PP), 24 h pulse pressure (24hPP), casual systolic (SBPc) and diastolic BP (DBPc), central systolic (CSBP), diastolic (CBBP), 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 SBPc (142.8 ± 15.9 vs. 162.8 ± 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 data shows that cfPWV correlates with SBPc, 24hSBP, 24hPP and CSBP, after controlled for age, in patients with RH. Acknowledgments: This work is financed by FEDER Funds through the Operational Competitiveness Factors Program - COMPETE and by National Funds through FCT - Foundation for Science and Technology within the project “PTDC/DTP-DES/1725/2014”.

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CARDIO ANKLE VASCULAR INDEX (CAVI) AS ARTERIAL STIFFNESS MARKER IN SUBJECTS WITH ANKYLOSING SPONDYLITIS

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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 pared 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) compared to controls. Moreover, in the AS group we observed a higher CAVI with a mean difference of 1.14 (p = 0.01) compared to controls.

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.