P156: CARDIO ANKLE VASCULAR INDEX (CAVI) AS ARTERIAL STIFFNESS MARKER IN SUBJECTS WITH ANKYLOSING SPONDYLITIS

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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).

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 participants with cfPWV < 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), 24h systolic BP (24hSBP) nighttime pulse pressure (night PP), 24h pulse pressure (24hPP), casual systolic (SBPC) and diastolic BP (DBPC), central systolic (CSBP), diastolic (CDBP) and central pulse pressure (CPP); controlled for age the correlation between variables independent t-tests were conducted to compare variables between those participants with cfPWV < and ≥ 10 m/s.

Conclusion: Our data shows that cfPWV correlates with SBPc, 24hSBP, 24hPP, casual systolic (SBPC) and diastolic BP (DBPC), central systolic (CSBP), diastolic (CDBP) 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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DETERMINANTS OF PULSE WAVE VELOCITY IN CHILDREN
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Background: Arterial stiffening measured by Pulse Wave Velocity (PWV) predicts cardiovascular events and mortality in adults. It advances with age and seems accelerated in children with certain disease conditions such as chronic kidney disease or diabetes. The aim of this study was to determine factors that influence PWV in children.

Methods: PWV was captured in 285 children aged 10-14 years attending a Portuguese school. The effects of sex, age, height, weight, body mass index, waist circumference, blood pressure, heart rate and sodium excretion in 24h urinary samples in PWV were tested.

Results: PWV correlated positively with age, height, systolic blood pressure, diastolic blood pressure and heart rate in males and females (p < 0.05) and with weight in males (p < 0.05). Major predictors for PWV in a multivariate regression analysis were gender, height, weight, diastolic 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.

References

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