P159: CORRELATION BETWEEN INFLAMMATORY STATE AND ARTERIAL STIFFNESS

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To link to this article: https://doi.org/10.1016/j.artres.2018.10.212

Published online: 7 December 2019
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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, ATCor Medical, Australia). Blood samples were collected to biochemical analysis, ADVIA1800™ (SiemensHealthcare Japan/Canada). The committee for research FTC protocol (N01827621). 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

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ARTERIAL STIFFNESS IN THE VERY OLD: THE AGA@4LIFE RESEARCH PROJECT
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Objective: To study the determinants of Arterial Stiffness (AS) in the elderly. Design and method: Cross-sectional, observational study of elderly participants. Blood Pressure (BP) and arterial function parameters were measured with a validated device. Clinical and demographic information was gathered, as well as the estimation of global cardiovascular risk, health related quality of life, dietary profile and cognition. Cholesterol and glycaemia were measured.

Results: 54 Participants recruited for the project, with a mean age of 73.0 ± 6.0 years (range: 65–94 years). Central BP was 119.4 ± 16.2 mmHg and 38.3 ± 11.6 mmHg, respectively for aortic systolic and pulse pressures. Mean pulse wave velocity (PWV) was 10.6 ± 1.36 m/s and the augmentation index was 27.0 ± 17.6%. Significant differences were depicted as a function of gender, with males presenting higher BP and PWV. The proportion of participants with increased PWV, according to the available reference values, was 31.6%. Participants with increased PWV had higher brachial and central BP, higher BMI and higher abdominal fat. Functionality was worst in high PWV participants, as well as cognitive function. Multivariate linear regression indicated age (β = 0.172; CI: 0.158;0.185; p < 0.001), and aortic systolic BP (β = 0.033; CI: 0.028;0.038; p < 0.001) as independent determinants of PWV. Also Hypertension (OR = 15.83; CI:8.16–30.7) and Diabetes (OR = 2.34;IC: 0.99-5.50) were independently associated with AS.

Conclusions: Accelerated AS is a common finding in the elderly and is highly associated with hypertension and diabetes. A strong association of AS with central BP and reflected waves is also of notice in this particular population.

Table 1. Percentage of altered laboratory parameters in patients, Pearson correlation coefficient between augmentations and adjusted PWV, mean and standard deviation and respective confidence intervals of the scores (n = 56).

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ASSESSMENT OF CAROTID PULSE WAVE VELOCITY (CARPWV) IN PATIENTS WITH ANKYLOSING SPONDYLITIS
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