P160: ASSESSMENT OF CAROTID PULSE WAVE VELOCITY (CARPWV) IN PATIENTS WITH ANKYLOSING SPONDYLITIS

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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; IC: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.
Introduction: Ankylosing spondylitis (AS) is an inflammatory rheumatic disease associated with accelerated atherosclerosis and increased cardiovascular morbidity and mortality.

Objectives: To assess the local arterial stiffness in carotid artery in subjects with AS compared with controls evaluated by carotid artery pulse wave velocity (carPWV).

Methods: Ultrasound examinations were conducted with a Mylab One color Doppler ultrasound diagnostic system (Esaote, Firenze, Italy), the right common carotid artery (RCCA) was scanned, using a 5-12 MHz vascular probe with built-in quality arterial stiffness (QAS) which calculate carPWV.

Results: Forty-seven male subjects (20 with Ankylosing Spondylitis and 27 controls) aged between 20 and 75 (mean age 41.17 ± 11) were evaluated. AS patients have not Hypertension, history of cardiovascular risk factors or smoking. Higher carPWV was observed in patients with AS (6.27 ± 0.72 vs 5.56 ± 1.02 m/s; p = 0.0123) compared with controls, respectively.

Conclusions: AS subjects showed higher carPWV compared with controls, this novel assessment for local arterial stiffness could be useful in the future to calculate cardiovascular risk, more studies should be developed with this method in this pathology in our population.

References

Poster Session II – Other
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RELATIONSHIP OF FIBRINOGEN WITH ARTERIAL STIFFNESS IS DIFFERENT ACCORDING TO GENDER. EVA STUDY
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Objectives: To analyze the association of arterial stiffness with the fibrinogen in general population without previous cardiovascular diseases. Differences by gender.

Methods: A cross-sectional study. Study population: From the population assigned to the participating healthcare centres, a cluster random sampling stratified by age and gender was performed to obtain 501 participants aged between 35 and 75, 100 per decade, (50% women) without cardio or cerebrovascular disease. Measurements: pulse wave velocity femoral carotid (cPWV) was determined using the Sphygmocor System and Cardio Anckle Vascular Index (CAVI) using the VaSera. Plasma fibrinogen was measured in blood.

Results: Mean values: age 55.9 ± 14.2 years (Males = 65.9 ± 14.3 years, Females = 55.8 ± 14.2 years, p = 0.935); CAVI:8.0 ± 1.4 (Males = 8.1 ± 1.5, Females = 7.9 ± 1.4, p = 0.043); cPWV: 6.5 ± 2.0 m/sec (Males = 6.8 ± 2.2 m/sec, Females=6.2 ± 1.8m/sec, p < 0.001) and fibrinogen: 314 ± 70 mg/Dl (Males = 198 ± 65 mg/Dl, Females = 330 ± 71 mg/Dl, p < 0.001). CAVI and cPWV showed positive correlation with fibrinogen (r = 0.248 and r = 0.147) in males (p < 0.005 in both cases), but not in the females (r = 0.126 and r = 0.101 p > 0.05 in both cases). In the multiple regression analysis after adjusting for age, cardiovascular risk factors, drugs and lifestyles, the association of CAVI with fibrinogen was β = 0.249 (95% CI 0.033 to 0.464) p = 0.024, and of the cPWV with fibrinogen was β = 0.01 (95% CI -0.031 to 0.042) p = 0.684 in males, without finding association between CAVI, cPWV with fibrinogen in the case of females (p = 0.144 and p = 0.825 respectively).

Conclusions: CAVI and cPWV showed a positive correlation to fibrinogen in males in general population without previous cardiovascular diseases, but not in females. However, after adjusting for confounding factors, the association only remains with CAVI in males.