

Results: On the whole population (n= 350, 55±15 years) we found a correlation between AnxA5 levels and PWV (p 0.04, r 0.10), SBP (p 0.03, r 0.11), HR (p 0.01, r 0.13) and age (p 0.01, r 0.13), while it was not correlated with DBP and BMI.

AnxA5 plasma levels were higher in OD than in NOD (12.5±9.7 vs 10.1±7.46 ng/mL, p-value 0.005). Moreover, AnxA5 plasma levels were higher in HT-NOD and HTOD compared with CNOD (14.2±10.9 and 13.2±10.2 vs 8.8±7.31, p<0.05) even after adjusting for age.

Conclusions: Our preliminary data show that AnxA5 levels have a relationship with arterial stiffness in hypertensive and healthy subjects. We can speculate that AnxA5 can be upregulated in treated hypertensive patients in an attempt to counteract incipient aortic stiffness that is indicative of initial atherosclerotic disease.

PP.44.32 CARDIOTROPHIN-1 IS AN EARLY BIOMARKER OF HYPERTENSION-INDUCED TARGET ORGAN DAMAGE

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Objective: Hypertension induces alterations in several organs that due to their susceptibility to this pathology are called target organs. The search of early biomarkers to detect the initial insult has been a priority in the last decade. We have analysed the role of cardiotrophin-1 (CT-1), a cytokine with hypertrophic effects in heart and other tissues, as a potential biomarker of hypertension-induced target organ damage.

Design and method: We have analysed 299 hypertensive patients and 99 healthy controls. We evaluate systolic (SP) and diastolic (DP) blood pressure continuously during 24 hours. Renal function was assessed by microalbuminuria and albumin/creatinine index. Retinopathy was evaluated by non-midriatic retinography with a validated software. Ankle-brachial index (ABI) was used to determine arterial stiffness. Serum CT-1 was analysed by ELISA.

Results: CT-1 serum levels are correlated with SP and DP, as well as with microalbuminuria and albumin/creatinine index. Higher CT-1 levels are also correlated with lower ABI levels, and with higher degrees of retinopathy in hypertensive patients.

Conclusions: Higher CT-1 levels in plasma are related with higher blood pressure levels and with target organ (kidney, vessels, retina) damage.

PP.44.33 RISK FACTORS, TARGET ORGAN DAMAGE AND CARDIOVASCULAR DISEASE ASSOCIATED WITH THE CARDIO ANKLE VASCULAR INDEX

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Objective: To analyse cardiovascular risk factors, target organ damage and associated clinical conditions, according to the 2013 European Society Hypertension Guidelines, and which of them are associated with the Cardio-Ankle Vascular index (CAVI).

Design and method: We performed a cross sectional study and included 503 subjects, aged 30 to 75 years (mean: 60.35 ± 8.44), 54.3% men, without cardiovascular diseases from the MARK study, selected by consecutive sampling from a Spanish health center. Measurement: Cardio Ankle Vascular index (CAVI) using the VaSera device (Fukuda Denshi). We used systolic blood pressure (SBP), as a quantitative variable, and cardiovascular risk factors (RF), target organ damage (TOD) and diabetes, cardiovascular or renal disease, as categorical variables, according the 2013 European Guidelines on Hypertension. Multiple linear regression analysis using the stepwise method was performed.

Results: The mean CAVI was 8.47±1.06; in men 8.48 ±1.10 and in women 8.44±1.01 (p>0.05). 33.7% were less than 8 (normal), 34.9% were between 8 y 9 (borderline) and 31.3% were equal or higher than 9 (atherosclerosis probably). Mean BP was 134/81 mmHg. The mean number of RF was 2.79±1.24 and TOD 0.76±0.94.

In multiple linear regression analysis, considering CAVI as a dependent vari-

able, with a corrected R2 = 0.36, the variables that remained in the equation were: systolic blood pressure (β=0.01, 95%IC 0.01 to 0.02, p<0.001); male sex (β=-0.25, 95%IC -0.42 to -0.08, p=0.004); age (β=0.76, 95%IC 0.58 to 0.95, p<0.001); smoking (β =-0.19, 95%IC -0.38 to 0.00); impaired fasting glucose (β=0.23, 95%IC 0.02 to 0.47, p< 0.066); obesity (β =-0.62, 95%IC -0.81 to -0.44, p<0.01); pulse wave velocity (β =0.49, 95%IC 0.22 to 0.72, p<0.001) and diabetes mellitus (β=0.32, 95%IC 0.12 to 0.53, p=0.002).

Conclusions: The risk factors associated with CAVI were, systolic blood pressure, male sex, age, smoking, impaired fasting glucose and obesity. Target organ damage as a cardiovascular disease was associated with pulse wave velocity, and diabetes mellitus.

PP.44.34 THE RELATIONSHIP BETWEEN THE CARDIO-ANKLE VASCULAR INDEX (CAVI) AND CARDIOVASCULAR RISK ESTIMATED WITH EUROPEAN AND AMERICAN RISK SCORES. MARK STUDY

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Objective: To analyze relationships between the Cardio-Ankle Vascular Index and cardiovascular risk estimated by scores from European and American populations.

Design and method: We performed a cross sectional study and included 503 subjects, aged 30 to 75 years (mean: 60.35 ± 8.44), 54.3% men, without cardiovascular diseases from the MARK study, selected by consecutive sampling from a Spanish health center. Measurement: Cardio-Ankle Vascular Index (CAVI) using the VaSera device (Fukuda Denshi). Risk factors and cardiovascular risk estimated by SCORE scale (2003), European Guidelines on Hypertension score (2013), Framingham D'Agostino score (2008) and American Heart Association (AHA) score (2013).

Results: The mean CAVI was 8.47±1.06; in men 8.48 ±1.10 and in women 8.44±1.01 (p>0.05). 33.7% of measurements were less than 8 (normal), and 34.9% were between 8 y 9 (borderline) and 31.3% were equal to or higher than 9 (atherosclerosis probably).

The CVR with the Framingham D'Agostino score was 20.05±13.25, with the AHA 2013 it was 13.20±9.89 and with SCORE it was 3.43±3.19. With the European guidelines on hypertension 2013 11% were in the low risk category (CAVI 7.99 ±0.85), 52% were at moderate risk (CAVI 8.31 ±1.00), 23% were at high risk (CAVI 8.76±1.00), and 14% were at very high risk (CAVI 8.89±1.23) (p<0.01).

We found a positive correlation between CAVI with cardiovascular risk estimated using SCORE (r=0.550), Framingham D'Agostino (r= 0.326) and AHA 2013, (r=0.466) (p<0.001 for all). These associations were maintained after adjustment for age.

In multivariate analysis of variance, controlled by age, we found estimated marginal means of cardiovascular risk in all scores, a lower cardiovascular risk in CAVI < 8, intermediate cardiovascular risk in CAVI between 8-9 and a higher cardiovascular risk in CAVI => 9.

Conclusions: The Cardio-Ankle Vascular Index is directly associated with cardiovascular risk estimated by different scales based on European and American populations, and this is maintained after adjusting for age.

PP.44.35 FIBRINOLYTIC AND INFLAMMATORY ALTERATIONS IN FAMILIAL COMBINED HYPERLIPIDEMIA, AND THE IMPACT OF ANGIOTENSIN II

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Objective: Subjects with familial combined hyperlipidemia (FCHL) have a poor vascular outcome. Angiotensin (Ang) II may be involved in the development of cardiovascular disease, which is characterized by haemostatic alterations and low-grade inflammation. We studied fibrinolytic and inflammatory alterations, and the impact of Ang II, in 16 otherwise healthy untreated subjects (11 men,