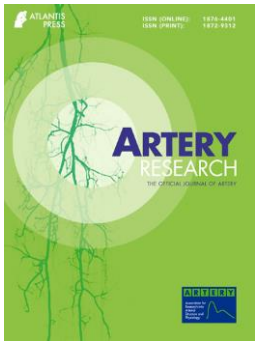

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P2.03: NON INVASIVE EVALUATION OF ATHEROSCLEROTIC PLAQUES BEHAVIOR IN HUMAN CAROTID ARTERIES: INDICATORS OF PLAQUE VULNERABILITY?

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$p<0.001$), while CAVI was not significantly associated with MACE (RR=1.93, CI 95% =0.99-3.39, p=0.055). Multivariate Cox analyses demonstrated that independent of age, mean BP and other risk factors, baPWV was a predictor of MACE. The sensitivity of baPWV was 71%, and its specificity was 67%. CONCLUSIONS: baPWV is the only significant predictor of MACE for men with CAD, while CAVI does not independently relate to meaningful 3.5 year prognosis in this cohort.

P2.03

NON INVASIVE EVALUATION OF ATHEROSCLEROTIC PLAQUES BEHAVIOR IN HUMAN CAROTID ARTERIES: INDICATORS OF PLAQUE VULNERABILITY?

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Introduction: The arterial wall, like a filter, buffers pulsatility of pressure and flow generated by cardiac activity, minimizing mechanical damage to the arterial wall. Development and progression of vascular disease involve changes in the structure, viscosity (V) and elasticity (E) of arteries, the main determinants of arterial wall buffering capacity (BC). Specific changes in V, E and BC of Atheromatous plaques (AP) and the neighbouring wall have not been fully characterized.
Objectives: To characterize V, E and BC of human carotid arteries with AP.
Methods: We selected 7 subjects (63±8 y.o.) with an echography of neck vessels (B mode and doppler, 10 mHz probe) similar baseline clinical and biochemical characteristics and AP in a common carotid artery (CCA). Five consecutive segments of the CCA, targeting the AP were evaluated (S1-S5 from proximal to distal, S3 the middle part of the plaque,S2 and S4 the proximal and distal shoulders). The instantaneous diameter and the signal of carotid pressure, calibrated with the brachial pressure (using a sphygmomanometer), were obtained and carotid Pressure / Diameter ratio, V, E and BC calculated.
Results: AP exhibited changes in V, E and BC. Biomechanical gradients were detected within the AP, being S3 the stiffer region (increased E, less V and BC, $p< 0,05$)
Conclusion: Carotid atheromatous plaques present characteristic changes in V, E and BC compared to the neighbouring wall (stiffer than weaker). Future studies of changes in plaques V, E, BC and vulnerability according to patient's clinical condition and plaque geometry and composition are needed.

P2.04

SINGLE-DOSE EFFECTS OF ISOSORBIDE MONONITRATE ALONE OR IN COMBINATION WITH LOSARTAN ON CENTRAL BLOOD PRESSURE

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Antihypertensive drugs can have different effects on central and brachial blood pressures and it has been suggested that these differences are relevant to outcomes. In particular, nitric oxide donors have marked acute effects on central blood pressure but have not been assessed when administered acutely with renin-angiotensin system blockade. Thirteen patients with high-normal to mild hypertension were randomized to a sequence of 5 single-dose treatments using a double-blind, balanced crossover study design. Treatments consisted of angiotensin receptor blocker (ARB) losartan 100 mg, isosorbide mononitrate (ISMN) 60 mg, losartan 100 mg + ISMN 15 mg, losartan 100 mg + ISMN 60 mg, and placebo. Central and brachial blood pressures were measured throughout 10 hours after the single-dose treatments. Treatment periods were separated by ≥4 days. Mean placebo-subtracted decrease from baseline in augmentation index (AIx), a parameter of central pressure, was approximately 1% for losartan 100 mg, 26% for ISMN 60 mg, 19% for losartan 100 mg + ISMN 15 mg, and 24% for losartan 100 mg + ISMN 60 mg. Whether administered with losartan 100 mg or alone, ISMN lowered mean AIx demonstrating that acute effects of a nitrate donor are much larger than those of an ARB even when administered with an ARB. Differences from placebo were statistically significant except for losartan 100 mg. A single dose of ISMN alone or when added to losartan 100 mg markedly lowered AIx indicating AIx is a good biomarker of acute hemodynamic effects of nitric oxide in patients with high-normal to mild hypertension.

P2.05

ARTERIAL WALL FUNCTION IN PATIENTS WITH CORONARY HEART DISEASE AND DYSLIPIDEMIA, COMPARATIVE EFFICACY OF EZETIMIBE, STATINS AND THEIR COMBINATION

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Purpose: The aim of this study was to compare efficacy of treatment by ezetimibe (EZ), starting doses of statins and their combination on lipids and