P.053: AN INTERLEUKIN-6 POLYMORPHISM DETERMINES CHANGES IN ARTERIAL STIFFNESS CAUSED BY ACUTE INFLAMMATION


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Conclusions: Patients with HCV have impaired aortic elastic properties, whereas HBV does not influence aortic stiffness. These findings are important to further characterize the increase of cardiovascular risk in patients with hepatitis C virus seropositivity and to specify the linking role of the adipose tissue-related hormones.

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RELATIONSHIP BETWEEN, BLOOD VISCOSITY, SHEAR STRESS AND ARTERIAL STIFFNESS IN PATIENTS WITH ARTERIAL HYPERTENSION
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The aim of the study was to investigate relationships between whole blood viscosity (WBV), ascending aorta shear stress (AASS) and carotid-femoral pulse wave velocity (PWV) in patients with arterial hypertension (HT).

Material and methods: Study group (G1): 43 pts. with primary HT - (age 53.6 ± 6.4 yrs.) was compared with control group (G2): 15 normotensives (age 55 ± 5.9 yrs.). Blood pressure using “Omron M5”, PWV using Compilor de-vice, WBV using “Brookfield DV III-pro”, aortic diameter and flow velocity (required for AASS calculation) using VIVID 7 GE ultrasonograph were measured.

Results: SBP (152 ± 11.3 vs 124 ± 9.7 mmHg, p < 0.001), DBP (92 ± 6.1 vs 83 ± 5.2 mmHg, p < 0.001), WBV at shear rate 100-400/ s (5.1 ± 1.2 vs 4.3 ± 0.9 cP, p < 0.02) and, PWV (11.8 ± 1.7 vs 8.8 ± 1.6 m/s, p < 0.05) were higher in G1 than in G2 group. Mean AASS was higher (27.7 ± 5.3 vs 21 ± 4.3 dyne/cm², p < 0.05) in G1 than in G2 group. In G1 group PWV correlated positively with age: (r = 0.37, p < 0.39), SBP: (r = 0.45, p < 0.05) and WBV: (r = 0.41, p < 0.05), and negatively with AASS: (r = -0.29, p < 0.05).

Conclusions: Hypertensive patients are characterized by stiffer aorta and higher WBV, as well as lowered AASS. Low shear stress seems to be one of the factors responsible for aortic stiffness in hypertensive patients.

P.055
COMMON CAROTID ARTERY STIFFNESS: MORE SENSITIVE TO AGE AND GENDER RELATED LARGE ARTERY STIFFENING THAN AORTIC PULSE WAVE VELOCITY?
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Background: The relationship between global arterial stiffness measures and measures based on local diameter and pressure readings is not yet fully understood.

Methods: We compared the changes with age and gender of aortic stiffness parameters—pulse wave velocity (PWV) and total arterial compliance (TAC) — to stiffness indices at the common carotid and femoral arteries—compliance (CC) and distensibility coefficient (DC); I-stiffness index—in a subset of 1026 women and 938 men, all apparently healthy subjects aged 35-55 participating in the Asklepios study.

Results: At the carotid artery, DC and I gradually increased with age and more pronounced stiffening in women, yielding a significant age-gender interaction. A similar trend was observed for CC. Femoral arterial stiffness did not change with age and no age-gender interaction was found. PWV indicated gradual stiffening with age occurring at an equal pace in men and women with no age-gender effect. TAC on the other hand did show a significant age-gender effect next to a change with age: it decreased in women, while remaining constant in men.

Discussion: In healthy middle-aged subjects, the age-related evolution of carotid stiffness and TAC indicates a more rapid increase in large artery stiffness in women than in men. This evolution, however, is not reflected in PWV. We speculate that PWV, integrating the properties of a large arterial segment that gradually varies from a large elastic to a more muscular vessel, may lack the sensitivity to pick up subtle age and gender effects primarily affecting the large, elastic arteries.

P.056
HERITABILITY OF ARTERIAL WALL INTIMA MEDIA THICKNESS IN DIFFERENT VASCULAR BEDS
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Background and purpose: Genetic and environment factors have been linked to the cause of atherosclerosis. Carotid and femoral intima media