[PP.26.365] RELATIONSHIPS BETWEEN HIGH-SENSITIVE C-REACTIVE PROTEIN AND ARTERIAL STIFFNESS IN HYPERTENSIVE PATIENTS

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Objectives: The present study was designed to evaluate the relationship between high-sensitive c-reactive protein (hs-CRP) and arterial stiffness by sex in patients with primary arterial hypertension.

Methods: A case-series study was made in 258 hypertensive patients, without history of cardiovascular disease or diabetes mellitus. Hs-CRP was determined by the nephelometric method. Office, ambulatory and home blood pressure were measurement. Pulse Wave velocity (PWV), central and peripheral augmentation index (AIx) were measured with the SphygmoCor system, and a SonoSite MicroMaxx ultrasound unit was used for automatic measurements of carotid intima media thickness (IMT).

Results: Central and peripheral AIx were higher in men than women (35.31 ± 9.95 vs 26.59 ± 11.45) and (102.06 ± 20.47 vs 85.97 ± 19.13) respectively. IMT also was higher in men than in women (0.73 ± 0.13 vs 0.69 ± 0.10). The hs-CRP was positively correlated with mean IMT (r = 0.261) and peripheral AIx (r = 0.166) in men, and with PWV in men and in women (r = 0.280, r = 0.250). The hs-CRP was negatively correlated with central AIx (r = −0.222) in women. In linear regression analysis, the hs-CRP would explain the 10.2% of PWV variability in women and 6.7% in men; 8.4% of the carotid IMT variability in men and 4.9% of central AIx variability in women. For each unit increase of hs-CRP, carotid IMT would increase 0.05 mm in males, PWV would increase 0.07 m/s in men and 0.08 m/s in women and central AIx would decrease 2.5 units in women.

Conclusion: Hs-CRP was positively associated with carotid IMT in men and negatively with central AIx in women, after adjusted by cardiovascular risk factors and antihypertensive and lipid lowering drugs. The association of hs-CRP with arterial stiffness parameters is different in men and women.

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