P8.13: CORONARY IMPLANTATION OF SIROLIMUS-ELUTING STENT IMPAIRS THE PERIPHERAL VASCULAR COMPLIANCE IN PATIENT WITH CORONARY ARTERY DISEASE

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Results: Subjects were categorized according to CRP levels that relate to future CVR (<1, 1-3, and >3 mg/L). There was no significant difference in the mean age (51.2 ± 5.3, 53.6 ± 6.6 and 53.6 ± 7.2, p = 0.19) and gender distribution (p = 0.44) between the CRP categories. However, body mass index and waist circumference differed as did mean arterial pressure (p < 0.001, p = 0.001 and p = 0.016 respectively). Carotid AS (2.86 ± 1.09; 3.49 ± 1.52; 3.77 ± 1.68, p = 0.028) and several parameters of EF assessed by laser Doppler in microcirculation, e.g. percent change of skin perfusion (5090 ± 2385; 3636 ± 1777; 3885 ± 2731 %, p = 0.033) and time to half before hyperaemia (9.76 ± 15.10; 4.51 ± 8.04; 3.47 ± 5.69 s, p = 0.036), were significantly related to CRP category (Kruskal-Wallis Test). Multiple regression analysis revealed that CRP is independently associated only with alterations in microcirculation – percent change of skin perfusion (rest-to-peak flow, beta = 0.27, p = 0.016) but not other arterial parameters.

Conclusion: In MetS patients CRP is independent predictor of endothelium-dependent alterations in skin microcirculation. Association between CRP categories and other parameters of microcirculation and carotid arterial stiffness was also observed.

P8.10
THE RELATIONSHIP BETWEEN AUGMENTATION INDEX AND AGEING: A META-REGRESSION ANALYSIS
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It has been reported that augmentation index (AIx) increases with age, but that the increase is more prominent in younger subjects [1], and may even decrease with age in individuals over 50yrs [2]. We undertook a meta-analysis of the published literature of 9,551 individuals (5,659 male), aged 4 to 91 years (mean 54.2 years) and undertook meta-regression to further investigate the relationship of AIx with age. AIx increased with age (0.51 (0.41, 0.61) %/yr; coefficient (95% CI); adjusted r² = 59.97%; p = 0.0001) with little evidence of marked non-linearity over the life course (Figure).

Meta-analysis of AIx vs age (solid line) with LOWESS fit shown(dashed line). This meta-analysis suggests that AIx increases relatively uniformly with age, although there may be a small decline in the rate of increase at older ages. 1. McEnery et al. J Am Coll Cardiol 2005; 46:1753-60. 2. Mitchell et al., Hypertension. 2004;43:1239-1245.

P8.11
SUPINE CLINIC BLOOD PRESSURE IS RAISED IN HYPERTENSIVE NON-DIPPERS: A NOVEL TEST TO DETERMINE DIPPER STATUS?
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Introduction: Patients with nocturnal blood pressure (BP) that fails to decline ≥10% compared with daytime BP (non-dippers) have increased mortality risk. This may be related to increased arterial stiffness and raised central BP whilst supine. This study aimed to test this hypothesis. We also sought to determine if non-dippers could be identified by the BP change from seated-to-supine positions.

Methodology: 24-hour-ambulatory BP was recorded in 95 treated hypertensive patients (aged 62.4 ± 8 years), comprising 43 (45%) non-dippers and 52 (55%) dippers (nocturnal BP decline ≥10%). Brachial and central BP (SpynmoCor) were recorded in the seated and supine positions after 5 minutes rest in each position. Arterial stiffness was estimated by augmentation index and aortic pulse wave velocity.

Results: Arterial stiffness was not significantly different between dippers and non-dippers, nor were brachial or central systolic BP (SBP) whilst seated (p > 0.05 for all). However, non-dippers had significantly higher supine brachial SBP (132 ± 14 vs 126 ± 11 mmHg: p < 0.05) and central SBP (121 ± 15 vs 115 ± 11 mmHg: p < 0.05). Moreover, the changes in both brachial and central SBP to the supine position were also higher in non-dippers (p < 0.05 for both). A brachial SBP increase of >8mmHg from the seated-to-supine position predicted non-dipper status with 87% specificity (p < 0.05). Night-time SBP correlated with clinic brachial SBP in the supine (r = 0.39; p < 0.001), but not seated (r = 0.19; p > 0.05) position (Z = 2.11; p < 0.05).

Conclusion: Supine central SBP is elevated in non-dippers, which may contribute to cardiovascular risk. Increased supine, relative to seated, brachial SBP may be a useful clinical test to identify non-dipper status.
Introduction: To the best of our knowledge, any studies evaluated potential influence on peripheral arterial stiffness, measured by pulse wave velocity (PWV), of percutaneous coronary intervention (PCI) and stenting. Methods: 150 patients were enrolled and underwent coronary angiography. In 68 patients was performed coronary stenting (PCI group). PWV was invasively obtained before and after coronary stenting. Results: Coronary stenting produced a significant augment of PWV (from 4.59 to 5.82 m/s, \(P = 0.000\)). In contrast, the sub-population which performed angiography without PCI (noPCI group), didn’t show any significant change in PWV. The analysis of PCI group demonstrated that only implantation of Sirolimus eluting stent (SES) caused a significant increase of PWV (from 4.62 to 6.15 m/s, \(P = 0.029\)). In a stepwise multiple regression model stent length, glycaemia and body mass index were significantly associated with increase of PWV, accounting for a total of 51.7% of the variation (\(P = 0.009\)). In particular, stent length accounted for 39.6% of the variance in PWV augmentation; glycaemia and body mass index explained an additional 12.1% of its variability. In the same analysis performed in PCI group, stent length accounted for 65.3% of the variance (\(P = 0.024\)) and other than glycaemia and body mass index, also implantation of SES explained an additional 18.5%. Conclusion: We have shown, for the first time, a significant association between SES implantation and an central stiffness worsening.