P7.13: DOES CAROTID ARTERY APPLANATION TONOMETRY CAUSE BAROREFLEX ACTIVATION?

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Results: Compared to normal TT levels, TD patients (n=19) were older (59.7 ± 8vs 52.2±10 years, P < 0.05) with higher BMI (28.6 ± 4.0 kg/m² vs 27.0 ± 4 kg/m², P < 0.05). They had lower EF, SV and inversely, higher EA/ ESV compared to control subjects with normal TT. TD was also associated to a higher mitral E/E' and PWV-e-f. The association remained significant in multivariate analysis after adjustment for age and cardiovascular risk factors.

Conclusion: Testosterone deficiency associates to an unfavorable LV performance as well to central arterial stiffness, with an adverse outcome on cardiac energetic. This information adds clinical value on hormone lower level, in both cardiovascular risk assessment and stratification of future preventive strategies.

P7.12 CIRCULATING VASCULAR GROWTH FACTORS AND AORTIC INDICES IN GHANAIANS WITH DIABETES AND HYPERTENSION
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Objectives: Impaired angiogenesis may be one mechanism linking large artery stiffness to organ damage. We investigated the relationship between arterial stiffness and regulators of angiogenesis as circulating vascular growth factors: vascular endothelial growth factor (VEGF), angiopeptin (Ang-1), Ang-2, which together with endogenous VEGF induces proliferation and the sprouting of new blood vessels, in Ghanaians with type 2 diabetes (T2DM) and hypertension (HTN).

Methods: 63 T2DM plus HTN patients, 44 patients with T2DM only, 54 patients with HTN only and 39 subjects without T2DM nor HTN were included in the study. Aortic pulse wave velocity (PWVao) and aortic systolic pressure (SBPao), augmentation index (Alx) and aortic pulse pressure (PPaao) were measured with TensioMed’s Arteriograph. Fasting blood samples were measured for blood glucose, lipid profile, Ang-1, Ang-2 & VEGF.

Results: T2DM plus HTN patients had higher levels of Ang-1 (44.3 vs 36.1 and 36.3 ng/ml; p = 0.004) & Ang-2 (875.65 vs. 764.4 and 710.35 pg/ml; p = 0.009) than T2DM only and HTN only patients respectively. Ang-2 levels were positively associated with PWVao (r = 0.17, p = 0.03), SBPao (r = 0.28, p < 0.01), and Alx (r = 0.22, p < 0.01). When all the vascular growth factors were forced into multiple regression analysis, adjusting for age, BMI, systolic BP and fasting glucose, only Ang-2 emerged significantly related to PWVao (β = 0.027, p = 0.02), SBPao (β = 0.54, p < 0.01), Alx (β = 0.3, p < 0.01).

Conclusion: Vascular growth factors were related to arterial stiffness indices, Ang-2 independently, in Ghanaians, and higher in patients with both diabetes and hypertension than with either condition alone.