P22: THE ROLE OF RENAL DYSFUNCTION ON TARGET ORGAN DAMAGE AND CARDIOVASCULAR RISK IN HYPERTENSIVES

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Results: The proportion of males (54 vs 76%) and smokers (19 vs 30%) were higher in P+. IMT and EF were significantly abnormal but not PWV or CBP in P.

Conclusion: In a very selective sample of middle age patients, the genetic burden and the functional alterations seem to be closely related to the presence of atherosclerosis suggesting a pathogenetic predominance over epigenetic factors.

Poster Session I — Hypertension I

P22
THE ROLE OF RENAL DYSFUNCTION ON TARGET ORGAN DAMAGE AND CARDIOVASCULAR RISK IN HYPERTENSIVES

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Purpose/Background/Objective: Hypertension is associated with increased left ventricular (LV) hypertrophy, aortic stiffness and renal dysfunction, which are all predictors of cardiovascular risk. We investigated the effect of renal dysfunction on LV mass and aortic stiffness in hypertensives.

Methods: We enrolled 1223 consecutive hypertensives (mean age 53.0 ± 11.6 years, 726 males). We estimated the glomerular filtration ratio (GFR) using the MDRD formula. We classified our population as hypertensives with GFR < 60 ml/min/1.73 m², those with moderate to severe renal dysfunction (GFR 60 ml/min/1.73 m² - 45 ml/min/1.73 m²) and those with normal renal function or mild renal dysfunction, demonstrating higher aortic stiffness and similar 10-year cardiovascular risk with hypertensives with normal renal function.

Conclusions: Renal dysfunction is associated with LVMI and aortic stiffness.

P23
THE COMPARISON OF PROGNOSTIC VALUE AMONG ANKLE BRACHIAL PRESSURE INDEX, ARTERIAL STIFFNESS AND PRESSURE WAVE REFLECTION IN SUBJECTS WITH CORONARY ARTERY DISEASE

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Objectives: The present retrospective study was conducted to compare the prognostic value among ankle brachial pressure index (ABI), brachial-ankle pulse wave velocity (baPWV), and radial augmentation index (rAI) in patients with coronary artery disease (CAD).

Methods: ABI, baPWV and rAI were measured in consecutive patients admitted for the management of CAD into our medical university hospital (n = 821, 677 males and 144 females; age 65.4 ± 10.5 years old), and they were followed at the outpatient department. During the follow-up period, events were defined as in-stent restenosis, new lesion of coronary artery sclerosis and MACE (i.e., acute coronary syndrome, cerebral infarction, cerebral bleeding and cardiac death).

Results: Among the study period (4.2 ± 3.0 years), the event of in-stent restenosis (n = 99), new lesion of coronary artery sclerosis (n = 77) and MACE (n = 18) were observed respectively. In Cox regression analysis after adjustment of age and gender, baPWV > 18 mm/sec, but not ABI > 18 mm/sec had significantly higher incidence of MACE (P = 0.021) (Figure). Both baPWV > 18 mm/sec (odds 1.61: 95% CI: 1.01 — 2.56, p = 0.044) and ABI > 18 mm/sec (odds 1.80: 95% CI: 1.03 — 3.04, p = 0.039) had significant predictive value of MACE.

Objective: We compared the accuracy of two oscillometric devices for measuring brachial and central blood pressures (BP) in children and adolescents, using high fidelity intra-arterial measurements as a gold-standard reference.

Methods: 57 children and adolescents aged 9.5 ± 4.6 years (mean ± SD, range 3 to 17, 74% <13 years) without aortic obstruction were recruited. A catheter was inserted into the ascending aorta via the femoral artery during a clinically-indicated procedure. Aortic BP was measured with a Verrata wire (Philips Volcano), along with brachial BP via two oscillometric devices: SphygmoCor XCEL (AtCor Medical, N = 51) and/or Mobil-o-Graph (MoG, IEMGmbH, N = 40). Intra-brachial arterial systolic BP was derived by calibrating the brachial pulse waveform (measured via tonometry after wire