**PP.43.390** DIFFERENTIAL EFFECTS OF ANTIHYPERTENSIVE TREATMENT ON OXIDATIVE STRESS AND INFLAMMATION

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**Objective:** Arterial hypertension is associated with increased oxidative stress and vascular inflammation. These factors may contribute to target organ damage and increased cardiovascular risk in hypertensive patients. Therefore, we studied the effect of four classes of antihypertensive drugs on oxidative stress and inflammatory markers in patients with essential hypertension.

**Design and Method:** In this double-blinded placebo controlled rotational study we randomized 41 treatment-naive mild to moderate hypertensive patients to receive doxazosin 4 mg, candesartan 16 mg, bisoprolol 5 mg, isosorbide mononitrate 50mg, and placebo daily for 6 weeks. Brachial blood pressure, plasma high sensitivity C-reactive protein (hsCRP), interleukin-6 (IL-6), asymmetric dimethylarginine (ADMA), oxidized LDL (oxLDL), interleukin-1 (IL-1), asymmetric dimethylarginine (ADMA), oxidized LDL (oxLDL), interleukin-1 (IL-1), and plasma high sensitivity C-reactive protein (hsCRP) were measured during placebo and after each treatment period. Oldham corrections were used to compare changes in blood pressure and biochemical markers for all drugs.

**Results:** Candesartan decreased systolic blood pressure and pulse pressure more effectively than isosorbide mononitrate and bisoprolol (p < 0.01). Only isosorbide mononitrate reduced hsCRP significantly (p < 0.01). Furthermore there was a trend (p = 0.06) to IL-6 reduction with isosorbide mononitrate. However, oxLDL was reduced significantly more with doxazosin than isosorbide mononitrate (p < 0.05). Candesartan and bisoprolol significantly decreased 8-isoprostanes while both bisoprolol and isosorbide mononitrate reduced ADMA levels (p < 0.01). The changes in inflammatory and oxidative stress markers were independent of blood pressure reduction. There were no significant differences in ICAM-1 and OLAB levels.

**Conclusions:** In this study a non-typical hypertension drug isosorbide mononitrate most potently reduced inflammatory markers while candesartan, doxazosin and bisoprolol effectively reduced oxidative stress. These effects of the drugs were independent of blood pressure reduction.

**PP.43.391** THE INFLUENCE OF AGE AND INITIAL BLOOD PRESSURE LEVELS ON BLOOD PRESSURE CONTROL AND TOLERABILITY IN HYPERTENSIVE PATIENTS UNDER SINGLE PILL FIXED-DOSE COMBINATION TREATMENT OF ANGIOTENSIN RECEPTOR BLOCKER AND CALCIUM CHANNEL BLOCKER

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**Objective:** Patients with stage 2 hypertension are at high risk of cardiovascular events, and this risk is further increased in patients with concomitant diabetes or metabolic syndrome. This was a post hoc analysis of the subgroup of patients with type 2 diabetes mellitus or metabolic syndrome (NCEP ATP III criteria) from an 8-week, double-blind study comparing the efficacy of aliskiren/amlopidine (ALI/AML) combination therapy with amlopidine (AML) monotherapy in patients with stage 2 hypertension.

**Methods:** In all, 485 patients (mean sitting SBP [msSBP] 160–200 mmHg) were randomized to ALI/AML 150/5 mg or AML 5 mg for 1 week, followed by double the doses for a further 7 weeks. Treatment analyses were performed post hoc by ANCOVA (BP changes) and logistic regression (BP control).

**Results:** In the overall study population, ALI/AML combination therapy provided significantly greater BP reductions and BP control rates (< 140/90 mmHg) than AML alone at week 8 treatment (Table), with additional least-squares mean reductions of 3.9 mmHg (95% CI 0.5; p < 0.05) and 2.9 mmHg (95% CI 0.6; 5.2; p < 0.05), respectively. There was also a trend towards more patients reaching BP goal with ALI/AML than with AML. Both treatments were generally well tolerated.

**Conclusions:** ALI/AML provided significant additional BP reductions over AML in patients with stage 2 hypertension and diabetes/metabolic syndrome, as well as in the overall patient population. Aliskiren/amlopidine combination therapy is an effective treatment for hypertension in patients with diabetes or metabolic syndrome.