Methods: This randomized, double-blind, placebo-controlled crossover study was performed in 18 non-smokers with Stage 1 hypertension (10 pts w/o ASCVD [Group A; 60% males; 50% whites]; 8 pts w/ASCVD [Group B; 63% males; 50% white]). Nine pts had hyperlipidemia (treated with statins). Patients received IRB or placebo for 6 weeks each (the IRB dose was uptitrated from 150 mg to 300 mg after 3 wks), with a 4-wk wash-out.

Results: IRB treatment decreased SBP (mean ± SD mm Hg; from 146.4 ± 12.4 to 140.7 ± 10.3; p<0.05). There was a greater impact of IRB on reduction of ADP-induced PAGG in Group A vs Group B pts (mean relative impact −1.57 ± 0.63 μ mol/L; p=0.02). This decrease in PAGG was independent of IRB dose and BP control. In contrast, Group B pts treated with IRB tended to have greater reduction in E-selectin (−7.72 ± 4.10 ng/dl; p=0.08); no differential effect on the changes in other inflammatory marker concentrations was noted. There was a greater reduction in TRA-induced PAGG with IRB 300 mg in hyperlipidemic pts (−0.67 ± 0.31; p=0.05).

Conclusion: Our findings suggest a possible impact of ASCVD and hyperlipidemia on the effects of IRB therapy on platelet aggregability and markers of inflammation in hypertensive patients. IRB therapy was associated with greater reduction of PAGG in patients without ASCVD, and of E-selectin concentration in patients with ASCVD. Greater reduction of PAGG in patients with hyperlipidemia may suggest a synergistic effect of IRB and statin therapies.

Key Words: Cardiovascular Disease, Angiotensin-Receptor Blocker, Platelet Aggregation

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EQUIVALENT BLOOD PRESSURE REDUCTION WITH ANGIOTENSIN II RECEPTOR ANTAGONIST BASED THERAPY COMPARED WITH A CALCIUM CHANNEL BLOCKER IN MILD-TO-MODERATE HYPERTENSIVE PATIENTS OF AFRICAN ORIGIN

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In the initiation of antihypertensive therapy in patients of African ancestry, calcium channel blockers (CCB) are superior to angiotensin-converting enzyme inhibitors (Saredi et al, Arch Intern Med. 2001;161:965–971).

The aim of the study was to evaluate whether CCB agents are superior to other agents that target the renin-angiotensin system (such as angiotensin II receptor blockers [ARB]), when initiating therapy in this ethnic group.

Patients of African ancestry with mild-to-moderate hypertension defined as mean daytime ambulatory diastolic BP (DADBP) ≥90 mm Hg and ≤110 mm Hg (n=125, age 50 ± 9, 58% female) were randomized to receive open-label losartan 50 mg or amlodipine 5 mg following a two week run-in placebo phase. If DADBP at 1 month was ≥90 mm Hg, hydrochlorothiazide (HCTZ) was added to those patients receiving the ARB or the dose of amlodipine was increased to 10 mg. If DADBP at 2 month was ≥90 mm Hg, the dose of the ARB was increased to 100 mg and HCTZ to 25 mg and 12.5 mg HCTZ was administered to the amlodipine treated group. Patients were followed for 6 months.

There were no differences in baseline characteristics between the two treatment groups. ABP values at 6 months of therapy were similar between the two groups (Table).

The initiation of antihypertensive therapy with an ARB is equally as effective at reducing BP values as a CCB in subjects of African ancestry.