EFFECT OF VALSARTAN OR RAMIPRIL ADDITION TO AMLODIPINE/HYDROCHLOROTIAZIDE COMBINATION ON LEFT VENTRICULAR HYPERTROPHY IN HYPERTENSIVE PATIENTS WITH TYPE 2 DIABETES

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Background: to compare the effect of valsartan (Val) or ramipril (Ram) addition to amlodipine (Aml)/hydrochlorothiazide (HCTZ) combination on left ventricular (LV) mass in type 2 diabetic hypertensive patients with LV hypertrophy.

Methods: a total of 180 mild to moderate hypertensive outpatients with well controlled type 2 diabetes and LV hypertrophy after a 2 week placebo period were treated with Aml 10 mg/HCTZ 12.5 mg for 4 weeks: the 154 patients whose blood pressure BP was not normalized by the dual combination (SBP > 130 mmHg and/or DBP > 80 mmHg) were enrolled in the study and randomized to the addition of valsartan 320 mg or ramipril 10 mg for 12 months. At the third month the non responder patients were discontinued. A total of 142 patients completed the study. Echocardiographic evaluation was performed at the end of the placebo period, of the amlodipine/HCTZ period and after 12 months of triple combination treatment.

Results: systolic and diastolic BP were similarly and significantly reduced in both treatment groups (-9.2 ± 5.5/-6.9 ± 3.4 mmHg in the valsartan group; -9.1 ± 5.9/-6.7 ± 3.8 in the ramipril group; all p<0.01 vs Aml/HCTZ combination). LV mass index was reduced significantly in both treatment groups (-9.6 ± 3.6 g/m² in the valsartan group and -7.1 ± 3.1 g/m² in the ramipril group; p<0.001 vs amlodipine/HCTZ combination), however the reduction was significantly greater with valsartan than with ramipril (p<0.01). Safety and tolerability were similar across both treatment groups.

Conclusions: Val/Aml/HCTZ combination was effective in promoting LV mass regression, and such regression was significantly greater than that obtained with Ram/Aml/HCTZ, independent of BP lowering. This finding suggests that valsartan is more effective than ramipril in attenuating this measure of myocardial damage in diabetic hypertensive patients with LV hypertrophy.