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**An Observational, Open-label, Parallel Group Trial Comparing
the effects of Azilsartan and Benidipine on arterial stiffness in
newly diagnosed hypertensives**

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ABSTRACT

BACKGROUND

Decreased arterial compliance is being identified as an important contributing factor for cardiovascular (CV) morbidity and mortality in a subset of the population especially in elderly, those with end-stage renal diseases and essential hypertension coronary artery diseases, stroke. Potent and safer new antihypertensive drugs like ARBs and calcium channel blockers can be seen to have an additive effect on arterial stiffness reduction as well as hypertension

METHODS

In this parallel group trial, we randomly assigned 74 patients with essential hypertension of Stage 1 with azilsartan or benidipine and central systolic and diastolic BP (cSBP and cDBP), peripheral systolic and diastolic BP (pSBP and pDBP), central pulse pressure (cPP), peripheral PP (pPP), amplified PP (aPP), corrected augmentation index (AIx75%), PWV and total vascular resistance (TVR) were measured using a Mobil- O-Graph® oscillometric device

RESULTS

During a period of 6 months, benidipine administration achieved PWV (cm/s) =7.114 MBP (mmHg) (r=0.913) or PWV (%) =0.519 MBP (%) (r=0.926) and azilsartan administration achieved PWV (cm/s) =8.125 MBP (mmHg) (r=0.913) or PWV (%) =0.586 MBP (%) (r=0.926) and shows decrease in mean BP but no statistical significance in terms of arterial stiffness (p=0.005) in both groups

CONCLUSIONS

Among patients receiving recommended therapy for hypertension, those in the azilsartan group had a slight effect on lowering arterial stiffness than those in the benidipine group and monitoring brachial artery PWV in hypertensive patients is convenient and provides useful information about the state of the arterial wall and may be applicable to estimation of cardiovascular risk

Key Words: pulse wave velocity, blood pressure, benidipine, azilsartan, hypertension , human