

**ANTIHYPERTENSIVE AND ORGANOPROTECTIVE EFFICACY OF A
FIXED-DOSE COMBINATION OF TELMISARTAN AND AMLODIPINE IN
PATIENTS WITH ARTERIAL HYPERTENSION**

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Arterial hypertension (AH) remains a leading modifiable risk factor for cardiovascular disease. Left ventricular (LV) hypertrophy and increased carotid intima-media thickness (IMT) are markers of target-organ damage, and their regression during antihypertensive therapy is associated with a reduced risk of stroke and cardiovascular complications. Fixed-dose combinations provide more pronounced blood pressure (BP) reduction through complementary mechanisms of action and improve treatment adherence.

To evaluate the antihypertensive, cardioprotective, and vasoprotective efficacy of six-month therapy with a fixed-dose telmisartan/amlodipine combination in patients with grade I–II AH.

The prospective study included 49 patients with primary grade I–II AH followed on an outpatient basis (mean age 52.3 ± 13.7 years; 61.2% women; AH duration 5.1 ± 4.1 years). The diagnosis was established in accordance with the 2023 European Society of Hypertension (ESH) guidelines. All patients received a fixed-dose telmisartan/amlodipine combination at a mean daily dose of $60 \pm 20/5$ mg, titrated every 2 weeks until the target BP was achieved. At baseline and after 6 months, office BP measurement, 24-hour ambulatory BP monitoring (ABPM), echocardiography with calculation of left ventricular mass (LVM) and its index (LVMI), and carotid duplex ultrasonography with measurement of intima-media thickness were performed. Statistical analysis was carried out using the paired Student's t-test and the Wilcoxon signed-rank test; differences were considered statistically significant at $p < 0.05$.

Systolic BP (SBP) decreased from 151.0 ± 15.0 to 122.0 ± 10.0 mmHg, diastolic BP (DBP) from 92.0 ± 9.0 to 77.0 ± 6.0 mmHg, and mean BP from 112.0 ± 10.0 to 92.0 ± 7.0 mmHg ($p < 0.001$ for all parameters). Target SBP < 140 mmHg was achieved in 44 patients (89.8%), and target DBP < 90 mmHg in 46 patients (93.9%). According to ABPM data, 24-hour, daytime, and nighttime BP levels, as well as BP load indices, decreased significantly: the daytime SBP load index fell from $57.2 \pm 28.5\%$ to $13.8 \pm 14.0\%$, and the nighttime index from $79.8 \pm 22.8\%$ to $42.9 \pm 34.1\%$ ($p < 0.001$). LVM decreased by -9.9 (-15.3 ; -4.4) g, and LVMI decreased from 77.4 ± 17.6 to 71.4 ± 16.2 g/m² ($p < 0.001$). Interventricular septal thickness decreased significantly (from 0.97 ± 0.18 to 0.92 ± 0.11 cm; $p = 0.005$), as did LV posterior wall thickness ($p = 0.013$) and carotid intima-media thickness (from 0.84 ± 0.07 to 0.80 ± 0.09 mm; $p = 0.021$). Volumetric parameters and diastolic function indices remained stable. No serious adverse events were recorded.

Six-month therapy with a fixed-dose telmisartan/amlodipine combination provides high antihypertensive efficacy. Along with a favorable hemodynamic effect, regression of LV hypertrophy was observed, in particular a reduction in LVMI and LV wall thickness, together with a decrease in carotid intima-media thickness, indicating the organoprotective potential of this combination against a favorable safety profile.