

Comparative Clinical Trial of Low-Dose Combination Therapy Versus Up-Titration Monotherapy in Patients with Occupational Stress

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The objective of this randomized study was to assess the effectiveness and safety of a low-dose combination treatment approach compared to monotherapy followed by dose escalation in patients with occupational stress. The purpose of the study was to establish if starting low-dose combination therapy with telmisartan and amlodipine would have a better systolic blood pressure reduction and quicker attainment of target blood pressure compared to telmisartan monotherapy with dose up-titration. This open-label study was performed during the period April-September 2025 at the out-patient department of Tashkent Teaching Hospital. In this study, 210 patients with systolic blood pressure of 140-159 mmHg and diastolic blood pressure of 90-99 mmHg who had never taken any antihypertensive medication before were allocated to two groups of 105 patients each. Patients in one group took telmisartan 40 mg once daily and increased the dosage to 80 mg if they failed to reach the target blood pressure in the fourth week. Patients in the other group received an initial combination therapy consisting of a single tablet comprising telmisartan 40 mg and amlodipine 5 mg and an increase in the dose of amlodipine to 10 mg at the fourth week if necessary. The primary endpoint was a mean difference in systolic blood pressure between baseline and week 12. The mean baseline systolic blood pressure in the two groups was 148.4 and 149.1 mmHg, respectively. In week 12, there was a greater decline in systolic BP in patients on combination treatment than monotherapy treatment (21.5 vs. 14.6 mmHg; difference 6.9 mmHg; 95% confidence interval -8.9 to -4.9, $P < 0.001$). Furthermore, 82.2% patients on combination treatment had their target BP reached versus 63.3% in monotherapy treatment ($P = 0.003$). There was no statistically significant difference in the incidence of side effects like peripheral edema and dizziness in the two groups during the study period, with more than 93% of patients completing the study within each group. Therefore, it can be concluded that starting combination low-dose therapy at an early point in patients with stressful working environment helps in reaching target blood pressure sooner without increasing the risk of developing adverse effects.

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