High blood pressure is controlled more effectively by two drugs in one pill

Hypertension, or high blood pressure (BP), is a major global public health problem, both because of how common it is and its correlation with cardiovascular disease. It has been identified as one of the major risk factors for cardiovascular disease and death in both men and women. Hypertension remains poorly controlled despite the wide availability of effective BP-lowering therapies.

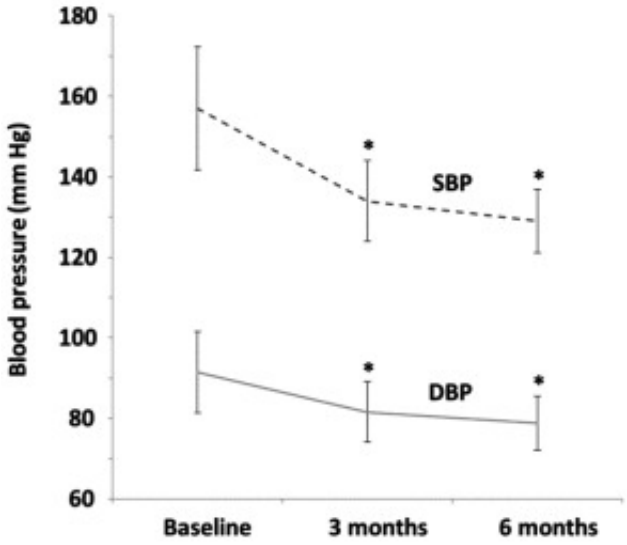

Fig. 1. Mean systolic blood pressure (SBP) and diastolic blood pressure (DBP) reductions after 3 and 6 months with single-pill combination perindopril/amlodipine in 2231 patients. *p ∠ 0.001 versus baseline.

In patients who are at high cardiovascular risk, it is important that target BP values should be achieved as quickly as possible (usually a systolic BP/diastolic BP ∠ 140/90 mm Hg). Treating patients with a single antihypertensive drug, however, rarely reduces high BP to within target values. Combining different BP-lowering drugs in a single-pill combination is more effective at reducing BP than increasing the dose of one drug, with the added benefit of reducing the number of tablets a patient takes, thus increasing the likelihood of the patient taking the treatment as prescribed (adherence).

The objective of this observational study was to assess the safety and effectiveness of a single-pill combination of perindopril/amlodipine in hypertensive adult patients over a 6-month period. Blood pressure was measured at baseline and at 3 and 6 months.

Of 2300 hypertensive patients in the study, only 52 patients (2.3%) discontinued treatment before the end of the study. Mean systolic BP decreased significantly from 157 to 134 mm Hg after 3

months of therapy (an average systolic BP decrease of 23 mm Hg) and was further decreased by 28 mm Hg to 129 mm Hg after 6 months. Mean diastolic BP decreased significantly from 92 to 82 mm Hg after 3 months

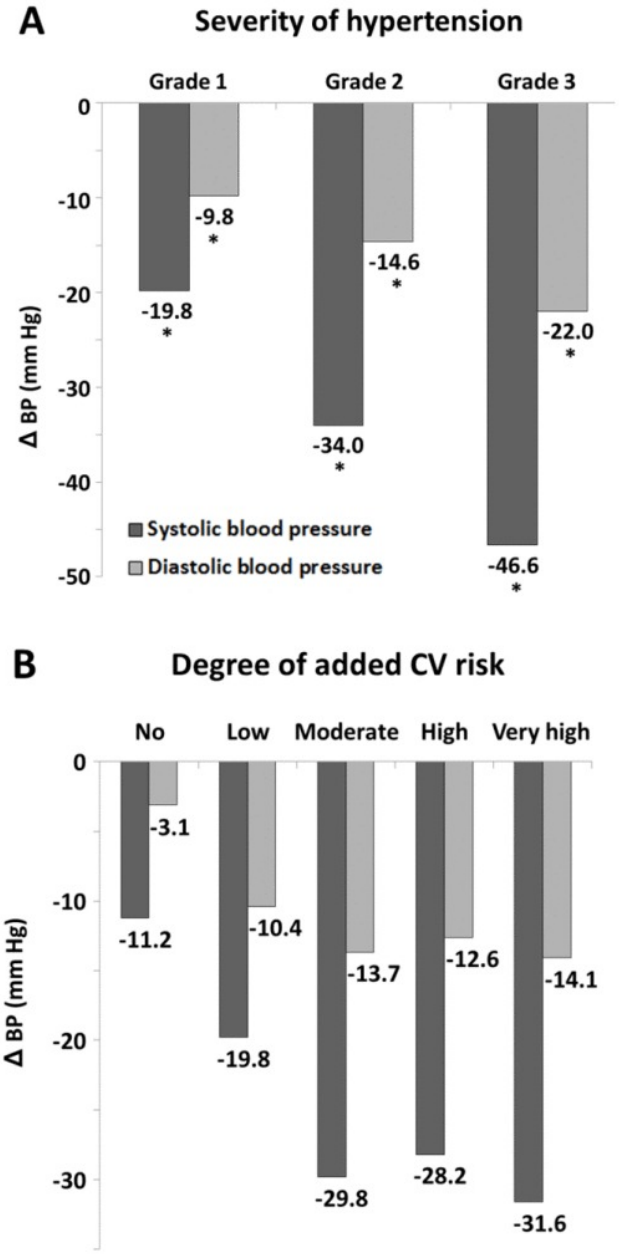

Fig. 2. Blood pressure (BP) reduction with single-pill combination perindopril/amlodipine according to severity of hypertension (A) and added cardiovascular (CV) risk stratification (B) at baseline, in 2231 patients. *p ∠ 0.001 versus baseline. Grade 1 hypertension, systolic BP 140-159 or DBP 90-99 mm Hg; grade 2 hypertension, systolic BP 160-179 or diastolic BP 100-109 mm Hg; and grade 3 hypertension, systolic BP ≥ 180 or diastolic BP ≥ 110 mm Hg.

(mean diastolic BP decrease of 10 mm Hg) and was further decreased by 13 mm Hg to 79 mm Hg after 6 months of treatment with perindopril/amlodipine single-pill combination. At 6 months of treatment, BP control was achieved in 85% of these patients. Patients with more severe hypertension at baseline and increased cardiovascular risk had significantly greater reductions in systolic and diastolic BP after 6 months of treatment. Adherence to treatment was high since 97% of the sample took the treatment regularly.
Real-life treatment of patients with hypertension and low-to-high risk of cardiovascular events using a single-pill combination of perindopril/amlodipine resulted in a significant reduction in BP after 3 and 6 months versus baseline. Hypertension was controlled in 85% of these patients. Perindopril/amlodipine was also effective at reducing and controlling BP in those hypertensive patients with high/very high added cardiovascular risk or diabetes mellitus. The greater the baseline severity of hypertension or degree of added cardiovascular risk, the greater the BP reduction. Treatment was safe and well-tolerated, with few patients discontinuing treatment or suffering from side effects. Current guidelines recommend the use of combination antihypertensive treatment over a single antihypertensive drug when it is necessary to control the BP faster, especially in patients with higher initial BP, and when better patient adherence is needed. Antihypertensive treatment with a single drug is less effective at decreasing BP, with patients more likely to stop treatment early compared with those on single-pill combination therapy. A further advantage of combination antihypertensive therapy is the potential for two different classes of drugs to work in synergy together, which may lead to a reduction in side-effects and provide a wider range of benefits than a single drug.

Conclusions: Single-pill combination perindopril/amlodipine safely reduced and controlled elevated BP in patients with hypertension in a real-life clinical setting, with good patient adherence to treatment. The degree of BP reduction observed was associated with the severity of hypertension or with total risk of cardiovascular events at baseline.

Publication

Blood pressure reduction and control with fixed-dose combination perindopril/amlodipine: A Pan-Hellenic prospective observational study.
Manolis A, Grammatikou V, Kallistratos M, Zarifis J, Tsioufis K
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