



# Effectiveness of angiotensin-converting enzyme inhibitors in combine therapy with beta-blockers in patients with nonobstructive hypertrophic cardiomyopathy

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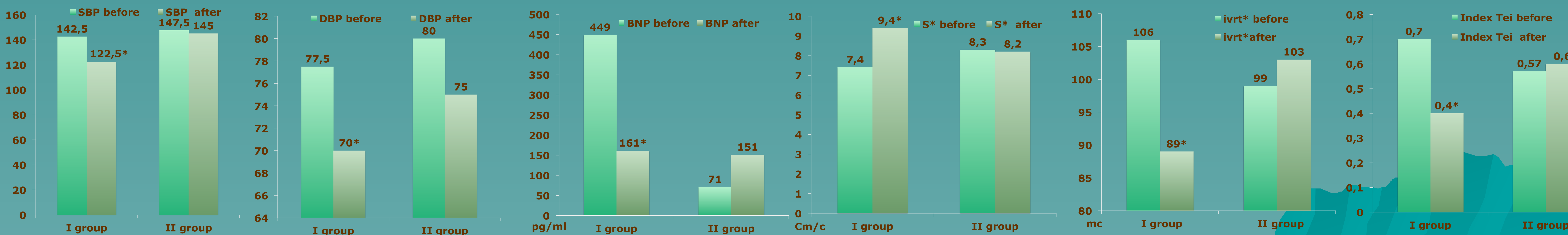
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The usefulness of ACE inhibitors in the treatment of symptoms in patients with hypertrophic cardiomyopathy (HCM) with preserved systolic function is not well established (HbC). Single studies demonstrate positive effects of ACE inhibitors on clinical status, systolic and diastolic left ventricle (LV) function in absence of consensus of opinion about it effectiveness.

**Purpose:** to assess the effect of ACE inhibitor perindopril in combine therapy with beta-blockers (BB) on regional longitudinal systolic and diastolic LV and right ventricle (RV) function in nonobstructive HCM patients.

**Methods:** We examined 20 patients with nonobstructive HCM (15 women, average age 57,0±12,9 years) treated with BB (bisoprolol 6.5± 2.17 mg) using tissue Doppler imaging (TDI) before and after 6 months of perindopril administration. Patients were divided in 2 groups: I (n=14) – treated with BB and perindopril (2.67 ± 1.13 mg); II (n=6) – control group treated with BB. Two groups were comparable in gender and age (p=0.2), clinical status and hypertension level (p=0.5), BB doses (p=0.7) and TDI parameters (index Tei LV (p=0.5), index Tei RV (p=0.73), septal systolic mitral annulus velocity (s') (p=0.9), septal early diastolic annular velocity (e') (p=0.8), septal late diastolic annular velocity (a') (p=0.2), lateral mitral annulus s' (p=0.5), e' (p=0.6) and a' (p=0.4), lateral tricuspid annulus s' (p=0.9), e' (p=0.4) and a' (p=0.6).

**Results:** After 6 months of therapy with perindopril systolic (SBP 122.5±14.3 and 145.0±16.1, p=0.04) and diastolic (DBP 70.0 ±3.1 and 75.0 ±4.8, p=0.05) blood pressure were lower in group I in comparison with II. Significant increase of lateral mitral annulus s' (from 7.4±1.3 to 9.4±0.6 cm/s, p=0.02), decrease of lateral mitral annulus ivrt (from 106.2±14.3 to 89.7±17.1 ms, p=0.04), decrease of index Tei RV (from 0.7±0.2 to 0.4±0.1, p=0.03) were observed in group I. There were no significant changes of TDI parameters in control group (p<0.05). Significant BNP decrease was revealed in group I (from 449.0±334.0 to 161.5±175.6, p= 0.017) whereas in group II BNP level was slightly increased (p=0.28).



**Conclusions:** Therapy with perindipril (2.67±1.13 mg) for 6 months in patient with nonobstructive HCM followed by decrease of BP level, longitudinal systolic and diastolic function improvement in nonhypertrophic segments of heart (lateral mitral annulus parameters and RV function). These changes were confirmed by significant BNP decrease.