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Cardioprotective efficacy of combined treatment with Indapamide, Amlodipine and Valsartan in hypertensive patients with obesity

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Aim: To study clinical efficacy of combined treatment with indapamide, amlodipine and valsartan with recommendations for a healthy lifestyle for hypertensive patients with obesity.

Material & Methods: The study included 66 obese patients (Body Mass Index-BMI 34.55 ± 3.9 kg/m²) with II-III stage of Essential Hypertension (ESH/ESC 2013), in average age 56.46 ± 7.95 years, who were resistant to previously bi- or three-component antihypertensive therapy. Office Blood Pressure (BP) was measured by Korotkov method. Echocardiography performed according to Penn Convention method with evaluating of Left Ventricular (LV) mass index, LV diastolic dysfunction and epicardial fat thickness. Intima-Media Thickness (IMT) of common carotid artery was measured by duplex ultrasound scan. All measurements performed before and after 24 weekly antihypertensive therapies. Mean daily doses of indapamide, amlodipine and valsartan were 2.52 ± 1.39 mg, 7.5 ± 2.6 mg and 135.65 ± 37.63 mg, respectively.

Results: Baseline systolic and diastolic BP was 159.63 ± 14.6 and 98.67 ± 6.38 mmHg respectively. After 24 weeks of triple combination therapy systolic and diastolic BP had significantly decreased to 123.11 ± 6.87 and 77.57 ± 5.23 mmHg respectively ($p < 0.0001$). BP targets were reached by 93.1% of patients. Cardio protection of triple combined therapy was expressed in significantly regress of LV hypertrophy on 13.8%, LV mass index was reduced from 145.88 ± 35.8 g/m² to 125.6 ± 33.8 g/m² ($p = 0.002$). LV diastolic dysfunction was significantly improved: E/A ratio increased from 0.80 ± 0.19 to 0.91 ± 0.21 ($p = 0.002$). Epicardial fat thickness decreased on 12%, from 3.9 ± 1.21 mm to 3.42 ± 1.13 mm ($p = 0.029$). IMT of common carotid artery also reduced from 1.08 ± 0.23 mm to 0.99 ± 0.23 mm ($p = 0.037$). All patients finished 24-weekly therapy with good tolerability.

Conclusion: Antihypertensive therapy of obese hypertensive patients with indapamide, amlodipine and valsartan is associated with high antihypertensive efficacy and has a positive effect on target organ damage and epicardial fat thickness.

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