The overall safety was similar in the two groups.

In conclusion, the combination irbesartan/HCTZ 150/12.5 mg is more potent in terms of BP reduction that the combination valsartan/HCTZ 80/12.5 mg. The more pronounced decrease in BP observed in the morning (before treatment intake) with irbesartan/HCTZ is consistent with the longer duration of action of irbesartan 150 mg which is not blunted by the addition of HCTZ 12.5 mg.

Key Words: Home Blood Pressure Monitoring, Irbesartan/HCTZ, Valsartan/HCTZ

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A NEW SYSTEM OF NITRIC OXIDE DONOR PROLONGED DELIVERY ON BASIS OF CONTROLLED-RELEASE POLYMER, POLYHYDROXYBUTYRATE

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Objective: Application of systems of prolonged nitric oxide (NO) delivery on basis of controlled-release polymers is the new and promising trend in the modern cardiovascular physiology and pharmacology. We have produced the novel system for controlled release of a new effective NO donor, FPTO. The system is based on a biocompatible biodegradable polymer used for medical implantation, poly(3-hydroxybutyrate) (PHB).

Design and Methods: PHB films loaded with FPTO were cast from chloroform solution. The release kinetics of PHB films containing a) 3.3% (PHB-FPTO(3.3%), 61 mg weight, 53 mkm thickness) and b) 10% (PHB-FPTO(10%), 60 mg weight, 56 mkm thickness) (w/w) FPTO were determined in PBH buffer (pH=7.4) at 37° C. The effectiveness of FPTO as vasodilators were examined at isolated tail artery that was precontracted with $5\bullet10^{-7}$ M 5-HT. To examine vasodilator activity PHB films loaded with FPTO were placed into the chamber with isolated tail artery.

Results: The duration of FPTO complete release from PHB-FPTO(3.3%) and PHB-FPTO(10%) films was 30 and 6 days, respectively. The averaged rates of FPTO release from PHB-FPTO(3.3%) were 417 ng/min at 1st hour, 26 ng/min at 1st day, 12 ng/min at 2-4 days, 11 ng/min at 5-10 days, 6 ng/min at 11-20 days, 3 ng/min at 21-30 days. The same characteristics for PHB-FPTO(10%) were 3227 ng/min at 1st hour, 397 ng/min at 1st day, 28 ng/min at 2-4 days, 0.2 ng/min at 5-6 days. Change of relative perfusion pressure of isolated tail artery at 1.2 ng/min rate of FPTO release was 30% decrease, at 12 ng/min - 51% decrease and at 120 ng/min - 66% decrease. PHB-FPTO(3.3%) film with the 12 ng/min rate of FPTO release caused 45% decrease of relative perfusion pressure of isolated tail artery. Thus, our methods allow to produce systems of NO-donor delivery with significantly different indexes of both release duration and rate. Besides the rate of NO-donor release from PHB films during prolonged period is sufficient for local vasodilatation.

Key Words: FPTO, Nitric Oxide, Polyhydroxybutyrate

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COMPLIANCE OF ANTIHYPERTENSIVE TREATMENT AND MONOTHERAPY. BEHAVIOUR OF THE CALCIUM-CHANNEL BLOCKER LERCANIDIPINE

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Background and Objective: Main reasons for unsatisfactory blood pressure (BP) control in hypertensive subjects are poor compliance to therapy and frequently change and/or interruptions of antihypertensive drug due to side effects. Aim of the study was to evaluate the persistence on first class of antihypertensive drug prescribed in a group of patients reffering to our Hypertensive Clinic.

Subject and Methods: Three hundred and forty-seven consecutive hypertensive patients in monotherapy who underwent to controls at 6, 12, and 24 months from the beginning of antihypertensive treatment were enrolled. In the group of patients treated with calcium-channel antagonists (CCB's), there were a consistent proportion of subjects treated with lercanidipine (L). Systolic and diastolic BP, antihypertensive treatment and/or changes of drug, and causes were detected at every visit.

Results: Fifty-three patients were treated with AIIRA, 61 patients with ACE-I, 61 patients with β-blockers, 63 patients with tiazidic diuretics, 63 with other CCB's, and 46 with Lercanidipine. One hundred and nightnine patients were male and 151 were female. The median age was 58 years in male and 62 years in female. All the groups of patients showed a comparable BP reduction. After 6 months of therapy there were a significant difference among the class of antihypertensive drugs and only 7% of the patients treated from the beginning with ACE-I, AIIRA and lercanidipine have changed their therapy, whereas a high proportion of patients treated with thiazide diuretics, β-blockers and other CCB's have modified the therapy. These differences persisted at 12 and 24 months. Moreover, lercanidipine when compared with other CCB's showed a significant longer persistence ($p<0.05$).

Conclusion: The results of this study suggest that L has a tolerance comparable to other class of antihypertensive drug such as ACE-I and AIIRB. This data can justified the improved compliance to lercanidipine when compared to other CCB's.

	Basal visit (%)	6 months (%)	12 months (%)	24 months (%)
AIIRA	100	93.5	85.8	78.5
ACE-I	100	91.8	83.7	74.5
Lercanidipine	100	91.3	84.7	67.3*
Other CCB's	100	83.9	77.4	60.6
β-blockers	100	91.5	77.1	58.8
Thiazide diuretics	100	63.3	46.6	44.4

$p < 0.05$ vs. others CCBs

Key Words: Antihypertensive Therapy, Compliance, Hypertension

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CHARACTERIZATION OF β_1-ADRENERGIC RECEPTOR SELECTIVITY OF NEBIVOLOL AND VARIOUS OTHER BETA-BLOCKERS IN HUMAN MYOCARDIUM

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β-adrenergic receptor blockers are the cornerstone of therapy for numerous diseases affecting the cardiovascular system. Nebivolol is a unique type of β-blocker that combines selective β_1-receptor blockade with endothelial-mediated nitric oxide-dependent vasodilation. The aim of this study was to determine the β_1/β_2 receptor selectivity of nebivolol in human myocardial tissue in comparison with several beta-blockers currently available for clinical use in the US or Europe.

Binding to β_1- and β_2-adrenergic receptors was investigated using 50pM final concentration of the nonselective β-receptor radioligand ^{125}[I]CYP in the presence or absence of varying cold β-receptor ligand concentrations in membranes prepared from explanted human left ventricular myocardium. Competition curve data were analyzed with nonlinear regression curve fitting deriving the goodness of fit (2 or 1 site), the dissociation constant (K_i) of each binding site, and the fraction/total of each site.