D100

ANTIOXIDANT ACTION OF MOEXIPRIL IN POSTMENOPAUSAL WOMEN WITH ARTERIAL HYPERTENSION

S. Nedozoda, V. Petrow, V. Zhelezkin. Medical Academy, Volgograd, Russia

The aim of this study was to assess the influence of moexipril on lipid peroxidation and antioxidant enzymes activity in human essential hypertension. There were 36 postmenopausal women aged 42 - 54 were enrolled into the study. After a 4-week placebo run-in period patients with DBP 95-105 mmHg were randomized to receive moexipril (n = 18) or placebo (n = 18). Concentration of malonaldehyde (MDA), activity of catalase (Cat), Cu/Zn-superoxide dismutase (SOD) and glutathione peroxidase (GSH-Px) were evaluated before, and after 30-day treatment with moexipril (7.5 mg once a day) or placebo. Treatment with moexipril resulted in decrease of malonaldehyde concentration and increase in antioxidant enzymes activity. MDA concentration decreased (1.18 ± 0.06 vs. 0.68 ± 0.2 mmol/mg prot, p < 0.01) and SOD activity was increased (82.4 ± 0.12 vs. 81.4 ± 0.002 U/mg prot, p < 0.01). Cat (122 ± 0.07 vs. 1.09 ± 0.02 U/mg prot, p < 0.01) and GSH-Px activity (87.4 ± 5.2 vs. 123.6 ± 13.1 U/mg prot, p < 0.01) showed no significant changes at the placebo group. Treatment with moexipril resulted in blood pressure normalization, significant drop in malonaldehyde concentration and increase in antioxidant enzymes activity. Increased lipid peroxidation and lack of adequate antioxidant response may play role in pathogenesis of lipid changes and essential hypertension in postmenopausal women. Moexipril exerts a concomitant scavenging action together with its antihypertensive action.

Key Words: moexipril, antioxidant action, postmenopausal woman

D101

WHICH ACE INHIBITOR IS BETTER FOR POSTMENOPAUSAL WOMEN WITH HIGH BLOOD PRESSURE?

S. Nedozoda, V. Petrov, V. Zhelezkin. Medical Academy, Volgograd, Russia

Data from cardiovascular studies exclusively performed in postmenopausal women are sparse. Therefore the present study was designed to compare the safety and the efficacy of the ACE inhibitors moexipril and enalapril in postmenopausal women with mild to moderate hypertension (stage 1 and 2). After a 4-week placebo run-in phase, 52 postmenopausal women with a mean age of 51.4 ± 6.3 and 52.2 ± 6.4 years in the moexipril and enalapril groups, respectively and with mild to moderate hypertension were randomized to receive either moexipril (15 mg once daily, or enalapril 20 mg once daily for a period of 12 weeks. Ambulatory BP was measured by Spacelabs 90207. Baseline 24-hour systolic (SBP) and diastolic blood pressure (DBP) values were 164.2/101.2 mmHg in the moexipril group and 162.2/102.5 mmHg in the enalapril group. At endpoint, blood pressure (SBP/DBP) was decreased by 26.6±16.8 mmHg and by 16.5±10.0 mmHg after treatment with moexipril and enalapril, respectively. 86.2% of the patients responded (SDBP < 90 mmHg) to treatment with moexipril and 54.6% to treatment with enalapril (p = 0.05). Adverse events (AE) were more frequently reported by patients treated with enalapril than by those treated with moexipril. The most common AEs in both groups were cough (6.2% at moexipril and 9.3% at enalapril)

The study show that moexipril was more effective than enalapril in lowering blood pressure in postmenopausal women with hypertension and also moexipril was better tolerated.

Key Words: ACE inhibitors, postmenopausal women

D102

EFFICACY AND TOLERABILITY OF AMLODIPINE IN ELDERLY PATIENTS WITH HYPERTENSION


It is well known that hypertension itself is associated with an increase in cardiovascular morbidity and mortality and it has been demonstrated that elderly people have the greatest risk: numerous Blood Pressure-lowering are available to increase their efficacy and reduce any undesirable effects. This study was to evaluate the antihypertensive efficacy of amlodipine in a group of elderly patients. 19 hypertensive patients (mean age 69 years) were included. After 24-hour ambulatory BP before and after 3 months of treatment was measured. At the end of treatment the mean 24-hour systolic blood pressure fell from 167.4 to 142.6 +/- 10.7 mmHg (p < 0.06) and the mean diastolic BP from 98 +/- 7.5 to 93 +/- 9.2 mmHg (p < 0.01). The numbers of systolic BP peaks over 180 mmHg and 160 mmHg numerically decreased to 41.6 and 47% versus baseline; the diastolic BP peaks over 105 mmHg and 95 mmHg to 51.3 and 59.6% versus baseline, respectively. The blood chemistry parameters show no variations and the drug had no adverse side effects.

If the aim of antihypertensive therapy is to reduce the adverse side effects, amlodipine may play an important role in the treatment of hypertension in elderly.

Key Words: Antihypertensive therapy - elderly - Calcium antagonist - Ambulatory BP

D103

INTEGRATED CARDIAC AND METABOLIC EFFECTS OF THE BETA-1-SELECTIVE BLOCKER NEBIVOLOL IN PHYSICALLY ACTIVE PATIENTS WITH ESSENTIAL HYPERTENSION

W. Mainka, W. Schillings, K. Scheele, J. Duperly, H. Ohba, J. V. Falkoff, T. Schramm, R. E. Ross, H.G. Predel. Institute of Cardiology and Sports Medicine, German Sports University, Cologne, Germany

Objectives: The present study was designed to investigate the integrated effects of the beta-1-selective blocker with vasodilator properties, nebivolol, on systemic haemodynamics, related hormones and energy metabolism as well as oxygen uptake and physical performance in physically active patients with moderate essential hypertension (EH).

Design and Methods: Eighteen physically active patients with moderate EH were included: age: 46±9.8 years, weight: 83±11.9 kg, blood pressure (BP): 157±14/107±9.7 mmHg, heart rate: 73±13.0/min. After a 45-day wash-out period a bicycle spiroergometry until exhaustion (WTWO) was performed followed by a 45-min. submaximal exercise test on the 2.5 mmol/l lactate-level 48 h later. Before, during and directly after exercise blood samples were taken. An identical protocol was repeated after a 6-week treatment period with 5mg nebivolol.

Results: Nebivolol-treatment resulted in a significant (p<0.05) decrease in systolic and diastolic BP and heart rate at rest and during maximal and submaximal exercise. Maximal physical work performance, blood lactate and rel. oxygen uptake (rel. VO2) were before and after nebivolol-treatment at rest and during maximal and submaximal exercise remained unaltered. Plasma catecholamines increased significantly during exercise; there was no significant influence of nebivolol.

Conclusions: Nebivolol was effective in the control of BP at rest and during exercise. We conclude that nebivolol has favorable cardio-pulmonary effects at rest and during exercise. Furthermore, nebivolol does not interfere with energy metabolism and substrate flow. This profile is suitable in physically active patients with EH.

Key Words: Essential hypertension, exercise, metabolism, nebivolol