A013


We showed that renal perfusion was lower in 16 healthy blacks than in 16 age-matched Caucasians by measuring PAH clearance in high salt balance (HS: 200 mmol). Caucasians increased their renal plasma flow (RPF) significantly when changing from low salt (LS: 10 mmol) to HS diets (p<0.004). Blacks did not despite similar PRAs. The change in RPF from a LS to HS state was -3.9±20 and 64±14 ml/min/1.73m² in blacks and Caucasians respectively (p<0.01). To assess the possible contribution of the renin system to renal control in blacks, we compared the renal response to captopril in 8 healthy blacks (31 yrs±3) and 7 age-matched Caucasians (32 yrs±3) while in HS balance.

The change in RPF response to 25 mg captopril was 37±7 and -42±12 in blacks and Caucasians respectively; despite similar PRA 0.4±0.1 and 0.2±0.1 [ng/Al/ml/hr] in blacks and Caucasians respectively.

Conclusions: RPF response to captopril is significantly higher in blacks compared with Caucasians (p<0.001). This may reflect incomplete suppression of the renin system in the mechanism involved may be implicated in the increased susceptibility to renal injury in blacks.

Key Words: renin, captopril, renal plasma flow

A014


Angiotensin II (Ang II) is a potent arterit constrictor and has pressor activity. The purpose of study was to compare effect of angiotensin II on blood pressure (BP) in 18 hypertensives (HT) and 11 normotensives (NT). HT and NT had similar age (54±11 vs 54±7 years, p=ns) and body mass index (28±5 vs 26±3 kg/m², p=ns). None of HT subjects were on antihypertensive medication at the time of study. HT had higher BP than NT (146/85 vs 127/74 mmHg, p=0.001) after 10 minutes of rest in supine position. Ang II was infused in incremental doses of (12.5, 25, 50 and 100 ng/ml) for five minutes for each dose. BP and heart rate were measured with Dinamap at baseline and during each infusion. Ang II increased BP to 153/88, 153/89, 164/93 mmHg in HT and 124/75, 123/75, 124/78, 122/79 mmHg in NT with incremental doses. Systolic BP increased significantly from baseline with each dose of Ang II (p<0.01) in HT. However, only highest dose of Ang II (100 ng/ml) induced significant increase in SBP from baseline (p<0.02) in NT. Ang II increased diastolic BP in doses of 50 and 100 ng/ml in HT (p<0.006) and 100 ng/ml in NT (p<0.02). Ang II infusion decreased heart rate significantly in HT (p<0.009) but not in NT. Conclusion: Ang II induced greater BP response in HT than NT. This enhanced pressor response to Ang II may contribute to pathogenesis of hypertension. The mechanisms of enhanced pressor response cannot be answered in this study and require further study.

Key Words: Angiotensin II, blood pressure, hypertension

A015

ARTERIAL HYPERTENSION, MYOCARDIAL INFARCTION AND OBSTRUCTIVE PULMONARY DESELSE: THREE-DIRECT EFFECT OF IRBESARTAN PROVIDING FOR OPTIMUM FORMING OF POSTINFARCTION HEART. P. Vakulyuk, O.B. Synoverska, P.L. Byelogurov. Department of Hospital Therapy and Cardiology Clinic of Medical Academy, Ivano-Frankivsk, Ukraine.

The investigation of irbesartan's (IRBE) effect on the patients after acute myocardial infarction (AMI) that developed on the background of arterial hypertension and bronchobstructive pulmonary disease is objective. 25 patients were investigated 1, 3 and 6 months after AMI. 15 patients took 150 mg of IRBE once a day in addition to the usual course of treatment 10 patients formed the test group. Echocardiography findings, 24 hour monitoring of blood pressure and external respiration's function was analysed. The decrease of final diastolic volume of the left ventricle, the increase of the expulsive fraction, more rare cases of pulmonary hypertension were noticed in patients who took IRBE. These improvements went with the normalization of daily profile of blood pressure, the decrease of systolic and diastolic arterial pressure. As to the function of external respiration the increase of indexes of vital capacity of the lungs, the decrease of the degree of respiratory deficiency took place under the influence of IRBE. The use of IRBE after AMI by patients with combined heart and lung pathology makes it possible to influence positively on the course of reconstructive period after AMI.

Key Words: irbesartan, myocardial infarction, arterial hypertension, bronchitis

A016

IRBESARTAN'S INFLUENCE ON THE FORMING OF THE CONNECTIVE CARDIAC MATRIX AFTER MYOCARDIAL INFARCTION WITH HYPERTENSION. P. Vakulyuk, P.L. Byelogurov, E.M. Nejko, N.M. Seradyuk. Department of Hospital Therapy and Cardiology Clinic of Medical Academy, Ivano-Frankivsk, Ukraine.

The investigation of the indexes' dynamics of the connective tissue's metabolism after acute myocardial infarction (AMI) when irbesartan (IRBE) is used - is objective. 22 patients after AMI were observed. They were treated with IRBE. The daily dose of the preparation was 150 mg. The test group consisted of 15 patients who were treated with placebo (PBO). Before the treatment and a month later the level of gluosaminoglycane (GAG), fibronactin (FN), free and connected oxyproline (OP) in blood serum was studied. The results were compared with echocardiography findings, in particular with the indexes of dilatation and hypertrophy of the left ventricle. Results were:

<table>
<thead>
<tr>
<th></th>
<th>IRBE</th>
<th>PBO</th>
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<tbody>
<tr>
<td>the treatment</td>
<td>before</td>
<td>after</td>
</tr>
<tr>
<td>GAG, mg/l</td>
<td>4,292±10, 3,562±10, 13,430±10, 4,122±0,11</td>
<td>4,292±10, 3,562±10, 13,430±10, 4,122±0,11</td>
</tr>
<tr>
<td>FN, mg/l</td>
<td>426,8±25, 9,402±2, 1,418±22, 3, 413,1±19,2</td>
<td>426,8±25, 9,402±2, 1,418±22, 3, 413,1±19,2</td>
</tr>
<tr>
<td>free OP, mg/l</td>
<td>16,1±0,4, 14,9±0,2, 10,3±0,3, 15,9±0,2</td>
<td>16,1±0,4, 14,9±0,2, 10,3±0,3, 15,9±0,2</td>
</tr>
<tr>
<td>connected OP</td>
<td>11,2±0,2, 9,3±0,1, 10,9±0,1, 10,4±0,1</td>
<td>11,2±0,2, 9,3±0,1, 10,9±0,1, 10,4±0,1</td>
</tr>
<tr>
<td>mmol/l</td>
<td>&lt;0,01</td>
<td>&lt;0,01</td>
</tr>
</tbody>
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IRBE prevented the connective tissue from further damage (the lower level of GAG and free OP) and simultaneously oppressed the development of myocardial fibrosis (the lower level of the connected OP). Such correlation of destructive and syrthetic processes went with positive changes of echocardiography findings. Affecting the metabolism of the connective tissue IRBE promotes the optimum restoration of cardiac matrix after AMI and prevents both the development of excessive myocardial hypertrophy and the dilatation of the left ventricular cavity. It mostly takes place through the influence on the synthesis of collagen.

Key Words: irbesartan, myocardial infarction, oxyproline, collagen