**P-207**

**EFFECT OF VALSARTAN AND ATENOLOL ON SEXUAL FUNCTION IN HYPERTENSIVE POSTMENOPAUSAL WOMEN**

Roberto Fogari, Paola Preti, Amedeo Mugellini, Luca Corradi, CarloPossiti, Annalisa Zoppi, Department of Internal Medicine, University of Pavia, Pavia, Italy.

Aim of this study was to compare the effect of valsartan and atenolol on sexual function in hypertensive postmenopausal women.

Eighty-two mild to moderate hypertensive (DBP ≥ 95 < 105 mmHg) postmenopausal women used of hormone replacement therapy (HRT) aged 51-55 years were enrolled. After a 4 week placebo period they were blindly randomized to valsartan 80-160 mg or to Atenolol 50-100 mg for 16 weeks according to a parallel arms design; the titration was performed after 8 weeks. At the end of placebo period and of each treatment period blood pressure (BP) was evaluated and the women were asked to complete a sexual function questionnaire that comprised 10 self-evaluations of various aspect of sexual desire, orgasmic response and coital activity. The questions were presented in a form of a visual analog scale. Both drugs significantly lowered BP without any difference between the 2 treatments, however in the valsartan treated group the scores for 4 of the items related to libido (sexual attraction, desire, fantasies and frequency taking initiative) significantly improved (p < 0.05) while in the Atenolol treated group the scores for the 2 items “sexual desire” and “sexual fantasies” significantly worsened (p < 0.05). The score for the items related to coital activity did not change with both drugs.

These results suggest that in postmenopausal women user of HRT valsartan treatment increases sexual desire and libido, while Atenolol does not change or reduce them. It could have some importance in the quality of life of these patients.

Key Words: Female sexuality, hypertension, Valsartan

**P-208**

**PLASMA TESTOSTERONE IN ISOLATED SYSTOLIC HYPERTENSION**

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The aim of this study was to compare plasma testosterone levels of elderly men with isolated systolic hypertension (ISH) with those of elderly normotensive controls.

We investigated 119 newly diagnosed never treated elderly men with ISH (SBP > 140 mmHg DBP < 90 mmHg) and 106 healthy normotensive (SBP ≤ 140 mmHg DBP < 90 mmHg) controls. All of them were aged 60 to 79 years, non diabetic, nonobese (BMI < 28 Kg/m^2) non smoking. All subjects were evaluated in the morning after an overnight fast. Evaluation included BP, BMI, determination of plasma testosterone. Smoking. All subjects were evaluated in the morning after an overnight fast. Evaluation included BP, BMI, determination of plasma testosterone.

The characteristics of the two groups are shown in the table.

Hypertensive men presented 14% lower level in plasma total testosterone. In both normotensive and hypertensive men Pearson’s correlation analysis showed a significant negative correlation between testosterone and age and between testosterone and BP values. Multiple regression analysis confirmed the inverse relationship between testosterone and age in normotensive but not in hypertensive ones. In addition a significant inverse correlation between testosterone and SBP (t value 2.54 Pr>0.01) was confirmed only in hypertensive men.

In conclusion these findings suggest that in elderly men with isolated systolic hypertension there is a lower plasma testosterone level than in normotensive and a strong relationship between systolic blood pressure and impaired testosterone levels. The nature of such a relationship and its physiological and clinical significance needs further investigation.

Key Words: Systolic isolated hypertension, testosterone, elderly

**P-209**

**WHICH POPULATION TO TREAT PREFERENTIALLY WITH AT1-RECEPTOR-BLOCKERS (ARB) THAN WITH ACEI AFTER OPTIMAAL STUDY?**

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OPTIMAAL study having shown that in patients with recent myocardial infarct (MI) and heart failure (HF), cardiovascular mortality is higher with losartan than with captopril, the first choice in these patients is still ACEI, unless intolerance. In patients with CHD but without HF, HOPE study has established ramipril as the reference treatment because it decreased the risk of MI, HF and stroke independently of BP and in patients with uncomplicated hypertension ANBP-2 trial has recently suggested an edge of ACEI over thiazide in global cardiovascular protection in spite of lower cerebral protection. Paradoxically no trial has yet been launched to compare ARB to ACEI in 3 populations in which the chance of ARB superiority over ACEI are the greatest thanks to a better cerebral protection mediated by non-AT1-receptors whereas comparable protection for CHD is expected since comparable MI recurrence risk between losartan and captopril was observed in OPTIMAAL. These populations are those in which MI risk is lower than that of stroke because of a low initial prevalence of CHD (≥ 16%) but in which stroke risk is high because of stroke history as in PROGRESS and PATS, of severe hypertension as in LIFE or of age as in SCOPE. Indeed the experimentally proven non-AT1-receptor-mediated brain-antischemic mechanisms have been recently supported by following clinical evidences : (1) the contrast between the lack of stroke protective effect (SPE) with AII-inhibiting perindopril (PROGRESS) and the 29% SPE with AII-stimulating losartan (PATS) for the same BP decrease. (2) the 25% greater selective SPE with AII-stimulating losartan than with the AII-suppressing losartan for the same BP decrease. (3) the contrast between the 10% BP-independent SPE of AII-stimulating candesartan comparatively to the AII-neutral association of β -blocker and DHP in SCOPE.

**Conclusion** : To base the preferential recommendation of ARB over ACEI in populations without CHD on evidence, a large trial comparing these 2 drugs is urgently needed in these populations.

Key Words: AT1-receptor-blocker, angiotensin II, cardiovascular protection

**P-210**

**COMPARISON OF STROKE-PROTECTIVE-EFFECTS (SPE) OF AT1-RECEPTOR-BLOCKERS (ARB). IMPORTANCE OF BLOOD- PRESSURE (BP) CONTROL AND OF THE COMPARATOR EFFECT ON ANGIOTENSIN (A)-II**

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The acute brain ischemia model by unilateral carotid ligation in the gerbil has shown that angiotensin II infusion accelerates recovery of blood flow in the ipsilateral brain and that preadministration of ACEI when compared to that of ARB was associated with a higher mortality rate. Furthermore ACEI co-administration with an ARB canceled the SPE of this latter. This suggests a SPE of non-AT1 receptor-activation since

<table>
<thead>
<tr>
<th>Characteristics of the 2 Groups</th>
<th>Normotensive</th>
<th>Hypertensive</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (y)</td>
<td>71.6 ± 6.3</td>
<td>72.1 ± 6.4</td>
<td>NS</td>
</tr>
<tr>
<td>BMI (Kg/m^2)</td>
<td>25.7 ± 1.1</td>
<td>25.2 ± 1.2</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>SBP (mmHg)</td>
<td>131.4 ± 7.2</td>
<td>171.6 ± 14.3</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>DBP (mmHg)</td>
<td>84.3 ± 4.1</td>
<td>85.5 ± 4.5</td>
<td>NS</td>
</tr>
<tr>
<td>Testosterone (ng/dl)</td>
<td>486.3 ± 136.1</td>
<td>415.4 ± 141.6</td>
<td>&lt;0.01</td>
</tr>
</tbody>
</table>
All-formation is increased with ARB but decreased with ACEI. The clinical relevance of this mechanism has been strongly supported by LIFE trial which has shown that, at comparable BP, losartan compared to atenolol conferred a selective 25% greater SPE while the higher AT1-blockade evidenced by greater LVH regression did not lead to greater prevention of cardiac complications. Indeed the hypothesis that higher AT1-blockade was responsible for this selective cerebral protection would imply a higher density of plaques in cerebral than in coronary arteries; which is unlikely, given the twice higher initial prevalence of CHD versus stroke in this population. SCOPE also supports this non-AT1-mediated brain anti-ischemic effect by showing also a selective 23% greater SPE of candesartan ± thiazide versus a placebo ± thiazides, betablocker and dihydropyridine (DHP). However SBP was 3 mmHg lower with candesartan and according to HOPE trial this lower BP could account for a 13% stroke risk decrease so that the BP-independent SPE of candesartan is only 10%. Lower SPE of candesartan compared to losartan cannot however be inferred from these percentages because the comparator in SCOPE had a neutral effect on ALL whereas in LIFE the comparator atenolol had an All-suppressing effect, which accounts for the 25% lower SPE of atenolol than that expected from the BP decrease this drug induced comparatively to placebo in MRC 1992 trial. Thus had candesartan been Lecompared to atenolol, its SPE would have actually been 35%, ie higher than that of losartan.

**Conclusion:** BP-control and comparator-effect on ALL are important in the evaluation of ARB-SPE.

Key Words: Stroke, AT1-receptor-blocker, Angiotensin II

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**P-211**

**Efficacy and Safety of Sustained-Release (SR)-Isradipine in Hypertensive Patients Treated with SR-Amlodipine, An Open-Label Drug Substitution Study**

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Both sustained-release amlodipine (SR-A) and isradipine (SR-I) provide effective control of hypertension with once daily dosing, but recent evidence (Messerli FH, Grossman E. *Am J Hypertens* 2002; 15; 1019–20) suggests that not all dihydropyridines are equivalent in blood pressure (BP) control and side effects. We tested this hypothesis in an open-label, drug substitution study. A total of 94 patients who had been treated with SR-A and BP was measured 6 weeks later. SBP was significantly lower in the SR-I 10 mg group after 2 weeks and remained lower (6 weeks). DBP was reduced, but the change was not significant. Seven additional patients were adequately controlled while on SR-I, because of reductions in SBP. Six weeks after returning to SR-A, BP had returned towards pre-SR-A BP baseline values. In addition, African-Americans and Caucasian women in the SR-I 10 mg group had statistically less edema throughout the entire 6 week period. There was a trend to less edema for Caucasian men, though did not reach statistical significance. There were no other reported differences in side effects. These results suggest that SR-I may provide better 24-hour control of BP than SR-A and produce less edema.

Key Words: Hypertension, calcium channel blockers, edema

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**P-212**

**Efficacy and Safety of Lercanidipine in Combination with Enalapril in HBP, Preliminary Results of Zanycontrol Study Group**

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To define the efficacy and safety of Lercanidipine (L) with Enalapril (E) in patients with essential hypertension (HBP). This is part of an extensive study aimed at assessing the value of HBPM and ABPM to monitor hypertensive patients.

An open, multicentric, prospective, observational, descriptive and transversal study reported to the Spanish Medicines Agency, conducted in the Primary Care setting on 1562 patients with HBP (SBP $\geq$ 140 and < 180 mm Hg, DBP $\geq$ 90 and < 110 mm Hg, sequentially recruited). Measurements were made following international criteria. Treatment was started with L and if BP was not controlled after 1 month E 20 mg was added. During the study, patients underwent 4 clinical controls in which BP, heart rate (HR), tolerability and compliance were recorded. BP measurements were taken with an OMRON M4 in the patient's home (HBPM), by the nurse and the doctor in the health center, in a counterbalanced manner, and in the pharmacy with both the usual sphygmomanometer and an OMRON M4. Patients were evaluated 6 months. The statistical tests applied were: Student's t test and Pearson's Correlation Coefficient. All data recorded on the questionnaires were processed using the statistical package SPSS 8.0 for Windows.

A total of 1562 patients were recruited. A total of 1424 adult patients with HBP were analyzed in the first visit and a total of 1208 completed the study. Of these, 38% were given E to improve blood pressure control. Mean initial SBP and DBP values were 160.4 ± 12.2 and 94.1 ± 7.7 mm Hg; at the end of the study SBP and DBP values were 135 ± 5 and 80.5 ± 6.7 mm Hg. The % of patients that reached BP control with L in monotherapy was 72%. (613/852) The association of both drugs achieved an SBP of 140 and < 180 mm Hg, sequentially recruited).

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L and E show good efficacy and safety. Side effects were uncommon and when they happened were described as mild or moderate.

Key Words: Lercanidipine, efficacy, tolerability.