glucose and lipid metabolism parameters and echocardiographic parameters were recorded at baseline and after 16 weeks of follow-up. Efficacy was evaluated considering 2 cut-off points for normal BP: \( \leq 90 \text{ mmHg} \) and \( \leq 85 \text{ mmHg} \).

Results: ABPM e HBPM showed maintenance of BP control during the 24 hours. In general the combination therapy with A + E was well tolerated and AE profile reveal an incidence of 2% of palpitation, 3.3% of dizziness, 13.5% of headache, 13.5% of cough and only 11.4% of leg edema. Majority of AEs were mild and only 3 patients were discontinued prematurely from study due to drug related AEs. The metabolic profile of this fixed combination was neutral and promoted reductions in left ventricle septal and posterior wall thickness.

Conclusion: A + E fixed combination therapy for a broad population of stage I and II EHT was very efficacious and similar for all patients subgroups with a very favorable AE profile and beneficial effects upon target organ damage and therefore is an excellent option for the treatment of EHT.

### Antihypertensive Efficacy

<table>
<thead>
<tr>
<th>BP-Baseline (mmHg)</th>
<th>BP-16h Week (mmHg)</th>
<th>BP ( \leq 90 ) BP ( \leq 85 ) Mean Dosage</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Patients ( n = 225 )</td>
<td>160.0 ± 17.9/100.8 ± 8.1</td>
<td>134.7 ± 14.5/85.5 ± 8.0</td>
</tr>
<tr>
<td>Elderly ( n = 29 )</td>
<td>168.3 ± 17.0/99.8 ± 8.1</td>
<td>138.5 ± 17.0/84.9 ± 7.6</td>
</tr>
<tr>
<td>Type 2 DM ( n = 16 )</td>
<td>171.0 ± 6.0/101.6 ± 4.4</td>
<td>141.3 ± 12.6/87.5 ± 11.2°</td>
</tr>
</tbody>
</table>

* \( P < 0.05 \) vs baseline

Key Words: Fixed combination therapy, amiodipine, enalapril

### P-228

**PHARMACODYNAMIC EFFECTS OF SINGLE ORAL DOSES OF OMAPATRILAT (40 AND 80 mg) AND FOSINOPRIL (20 mg) DURING SALT DEPLETION AND SALT REPLETION IN NORMOTENSIVE SUBJECTS**


Objective: To compare the 24 hour pharmacodynamic effects of omapatrilat 40mg (O40) and 80mg (O80) with fosinopril 20mg (F20) during salt depletion or salt repletion in normotensive subjects.

Methods: A 2 panel, single oral dose, double-blind, placebo (P) controlled, randomized 4 period crossover study design was used. Each drug was given 2 weeks apart either 12h after 40mg furosemide intake + 36h of low sodium diet (LS: NaCl \( <30\text{mmol} \), \( n = 12 \)) or after 6 days of high sodium diet (HS: NaCl \( >250\text{mmol} \), \( n = 12 \)) after 4 days of high sodium diet (HS: NaCl \( >250\text{mmol} \), \( n = 12 \)). Mean BP (MBP, mmHg), plasma active renin (AR, pg/ml), plasma ACE activity (mU/ml), change in urine ANP (ANPu, ng/h) and natriuresis (NaU, mmol/h) were measured for 24 h on each study day.

Results: ACE was much more inhibited by O40 and O80 than F20 24 h post-dose, with no difference between O40 and O80. The rise in AR was significantly larger after O40 and O80 than F20 in both panels but O40 and O80 did not differ. During LS, the fall in MBP was significantly larger after O40 and O80 than F20 but O40 and O80 did not differ. During HS, only O40 and O80 decreased significantly MBP. In both HS and LS, O80 and O40 dose-dependently increased ANPs whereas F20 had no effect. O40, O80 and F20 had similar mild and transient natriuretic effect during LS but not during HS.

Conclusion: Omapatrilat has a potent and long-lasting inhibitory effect on ACE and the dose of 40mg provides the maximal hormonal and BP effects. During both HS and LS, O40 was more effective on AR release and MBP fall than F20 despite no additional natriuretic effect in the presence of increased ANPus.

Key Words: Vasopeptidase inhibitors, Renin-angiotensin system, Atrial Natriuretic Peptide

### P-229

**CONTROL IN MORNING BLOOD PRESSURE RISE: THE IMPORTANCE OF DRUGS ADMINISTRATION TIME**

Aurelio Leone, AUSL 5 SPEZZINO, Territorial Cardiology, La Spezia, Italy.

Antihypertensive drugs, usually administered once a day, are assumed frequently in the morning when Blood Pressure (BP) rises especially in those patients (pts) with cardiovascular complications. The purpose of this study was to assess if changing the drug administration time in the evening could reduce morning rise in BP. 34 hypertensive pts (mean systolic BP 162 ± 18 mmHg, and mean diastolic BP 89 ± 9 mmHg), 18 males (53%) (mean age: 63 ± 4), and 16 females (47%) (mean age: 67 ± 5) were studied. They showed a mean morning rise in BP of 11 ± 5 mmHg for systolic BP, and 6 ± 4 mmHg for diastolic BP. Pts were closely followed-up 3 months. Weekly pts measured and recorded home BP (HBP) twice: between 07.00 a.m and 09.00 a.m hours, and 07.00 p.m and 09.00 pm hours. Pts received ACE-Inhibitors (n=21 pts, 62%), Calcium Channel Blockers (n=9 pts, 26%), and Calcium Channel Blockers plus Amiloride (n=4 pts, 12%). ACE-Inhibitors and Calcium Channel Blockers changed the time of administration in the evening. Observed results showed no change in evening HBP. On the contrary, a statistically significant reduction in morning HBP rise (P<0.01) was seen for systolic BP (6±1-2 mmHg). Morning diastolic BP decreases 5±2.8 mmHg (P not statistically significant). In conclusion, drug administration time could be an useful method for a better control of BP.

Key Words: Blood pressure morning rise, antihypertensive drugs, administration time

### P-230

**EFFECTS OF VALSARTAN ON LEFT VENTRICULAR SYSTOLIC AND DIASTOLIC FUNCTION IN PATIENTS WITH ESSENTIAL HYPERTENSION**

Donghao Li, Qi Hua. Department of Cardiology of Xuan Wu Hospital, Capital University of Medical Sciences, Beijing, China.

Abstract: To investigate the effects of Valsartan on left ventricular function and its antihypertensive efficacy. Echocardiography was performed in 89 patients with essential hypertension who were treated with Valsartan before and after 4 weeks treatment 36 patients with essential hypertension were control. After 4 weeks treatment, the systolic and diastolic blood pressure decreased obviously, peak flow velocity and time velocity integral of atrial contraction decreased \( P = 0.001 \) and \( < 0.05 \), and E/A ratio significantly increased \((P<0.01)\). There were no changes in systolic function in patients treated by Valsartan and in control subjects. Valsartan could effectively decrease blood pressure and improve left ventricular diastolic function in patients with essential hypertension.

Key Words: Essential hypertension, Valsartan, echocardiography