group, which were treated with valsartan, Valsartan and Hydrochlorothiazide, Hydrochlorothiazide for 4 weeks respectively. Clinical blood pressure, ambulatory blood pressure and biochemical data were measured.

**Results:** Antihypertensive effects and smooth index of diastolic blood pressure in Valsartan and Hydrochlorothiazide group were better than Valsartan or Hydrochlorothiazide group. Uric acid of hydrochlorothiazide increased, but there were no changes in other groups. The three groups had no adverse effects on serum lipids, blood glucose, electrolyte, function of liver and kidney.

The combination of Valsartan with Hydrochlorothiazide was safety, stability and effective against hypertension, which were better than single drug. Valsartan had beneficial effects in decrease uric acid.

Key Words: Valsartan, Hydrochlorothiazide, Essential Hypertension

**P-215**

**EFFECT OF AMLODIPINE ON LEFT VENTRICULAR REMODELING AND FUNCTION IN PATIENTS WITH ESSENTIAL HYPERTENSION**

**Mei Li, Qi Hua, Department of Cardiology, Beijing Xuanwu Hospital, Beijing, Beijing, China.**

To observe the effect of the calcium antagonist Amlodipine on left ventricular remodeling in patients with primary hypertension.

In a 1 month randomised single blind trial, 20 cases with untreated primary hypertension previously received Amlodipine (5mg/Qd). M-mode and Doppler echocardiography were used to observe the effect after 1 month.

Amlodipine shows a long-time and stable effect and effective in preventing from left ventricular remodeling and improving diastolic function.

Key Words: Hypertension, Amlodipine, Diastolic Function

**P-216**

**EFFECT OF BISOPROLOL ON VASCULAR ENDOTHELIAL FUNCTION IN PATIENTS WITH ESSENTIAL HYPERTENSION**

**Qi Hua, Dongbao Li, Hailing Chen. Department of Cardiology, Beijing Xuanwu Hospital, Beijing, Beijing, China.**

To investigate the effects of Bisoprolol on renin-angiotensin- aldosterone system(RAAS), endothelial function and its antihypertensive efficacy.

The changes of plasma endothelin (ET), nitrogen oxide(NO), renin(Ren), angiotensin II(Ang II), aldosterone(Ald) and clinical blood pressure(CBP) were observed before and after Bisoprolol was taken for 4 weeks in 36 patients with essential hypertension.

After 4 weeks treatment of Bisoprolol, decreased values of clinical systolic blood pressure and clinical diastolic blood pressure were 16.23mmHg and 7.65 mmHg respectively(P < 0.01); Ren, ATII, Ald decreased and NO significantly increased (P < 0.05 and 0.01 respectively), but NO/ET and ET had no any changes(P > 0.05).

Bisoprolol can inhabit RAAS and improve vascular endothelial function, and decrease blood pressure and protect target organ simultaneously.

Key Words: Essential Hypertension, Bisoprolol, Vascular Endothelial Function

**P-217**

**EFFECTIVENESS AND TOLERABILITY OF ENALAPRIL PLUS NITRENDIPINE ON A FIXED DOSE IN HYPERTENSIVE PATIENTS OVER 65 YEARS**

**Alex Iniguez, Alex de la Sierra, Manuel Luque, Josep Combalia. Departamento Medico, Grupo Vital, Sant Joan Despi, Barcelona, Spain; Unitat d’Hiptenso Arterial, Hospital Clinic de Barcelona, Barcelona, Spain; Unidad de Hipertension Arterial, Hospital Clinico San Carlos, Madrid, Spain.**

**Purpose:** To assess the effectiveness and tolerability of a fixed dose of enalapril + nitrendipine (10 + 20 mg, respectively) in hypertensive patients over 65 years.

**Methods:** Observational, prospective and multicentre study. All patients were over 65 years, had a non-controlled hypertension with monotherapy or other pharmacological combination, and were assessed by 1,345 primary care physicians (2,658 patients). Patients were assessed after 1 and 3 months.

Patients were divided as strict responders when SBP < 140 mmHg and DBP < 90 mmHg in non-diabetic patients or when SBP < 130 mmHg and DBP < 85 mmHg in diabetic patients or presenting a minimal decrease of 20 mmHg in SBP and 10 mmHg in DBP.

**Results:** Mean age was 72.7 (SD = 5.4) years, 58.5% of the patients were women, 77.5% non-smokers, 83.3% did not have alcohol consumption habits, and 63.6% did not practice any sport regularly. Patients were classified as having a cardiovascular risk factor when presenting a BMI > 30 kg/m² (30.7% of patients), HDL < 35 mg/dL (5.2%), dislipemia (42.1%), any cardiovascular disease (20.8%), and diabetes (29.9%). 76.0% of the patients had at least one cardiovascular risk factor.

A mean decrease of 28.1 (SD = 15.2) mmHg on SBP and 13.7 (SD = 9.4) mmHg on DBP was observed from the start of the study to the final visit at month 3 (Friedman test, p < 0.001). 47.8% of patients were strict responders at month 1 of the treatment, and 70.8% at 3rd month of treatment (McNemar test: p-value < 0.001).

229 patients (8.62%) withdrew from the study due to adverse events. 328 patients (12.3%) presented some adverse event, the most frequent categories of adverse events being peripheral edemas (5.68%), flushing and heat sensation (2.26%), and cephalalgias (1.43%).

**Conclusions:** The results confirmed the remarkable effectiveness of a fixed combination of enalapril + nitrendipine in reducing blood pressure in patients over 65 years, with a satisfactory tolerability.

**Funding Source:** Grupo Vita, Barcelona, Spain.

Key Words: Enalapril + Nitrendipine, Hypertension, Elderly

**P-218**

**COMPARISON OF THE EFFECTS OF VALSARTAN HCT VERSUS AMLODIPINE ON 24-HOUR ABPM BLOOD PRESSURE IN AFRICAN AMERICANS WITH MILD TO MODERATE HYPERTENSION: THE ADVANCE TRIAL**

**Kenneth Jamerson, Matthew R Weir, Elijah Saunders, Steven Zelenkofske, the AADVANCE Investigators. Department of Internal Medicine, University of Michigan, Ann Arbor, MI; Department of Medicine, University of Maryland School of Medicine, Baltimore, MD; University of Maryland, Baltimore, MD; Novartis Pharmaceuticals Corporation, East Hanover, NJ.**

The African American Diovon (Valsartan) Amlodipine (Norvasc) Clinical Efficacy (ADVANCE) trial examined whether the ARB valsartan plus low-dose hydrochlorothiazide (HCT) would produce blood pressure (BP) control similar to that of amlopidine in African-Americans with mild-to-moderate hypertension, a population in which renin-angiotensin system blocking agents are underused. This 12-week, prospective, randomized, double-blind trial enrolled 482 African-Americans with mild-to-moderate hypertension. After a 2–3 week placebo run-in, subjects were randomized to 160 mg valsartan or 5 mg amlopidine for 2 weeks, then force-titrated to valsartan HCT (160/12.5 mg) or amlopidine (10 mg) for an additional 10 weeks. BP was assessed by ambulatory 24-hour BP monitoring (ABPM).

The study population was 48% male, with a mean age of 50.7 ± 10.4 years. Baseline mean 24-hour ABPM diastolic BP (DBP) was 93.6 ± 8.6 mm Hg in the valsartan HCT group and 93.2 ± 9.8 mm Hg in the amlopidine group; baseline mean 24-hour ABPM systolic BP (SBP) was 146.3 ± 13.0 mm Hg and 146.0 ± 13.5 mm Hg, respectively. Mean duration of hypertension in the valsartan HCT and amlopidine groups was 10.0 ± 8.6 years and 8.5 ± 7.5 years, respectively. Valsartan HCT and amlopidine produced equivalent reductions in mean 24-hour ABPM DBP (–10.2 ± 8.6 mm Hg and –9.1 ± 8.3 mm Hg, respectively) and ABPM SBP (–15.9 ± 12.1 mm Hg and –14.5 ± 12.2 mm Hg, respectively). A significantly higher percentage of subjects reported peripheral edema or joint swelling as adverse events with amlopidine (5.8% and 2.9%, respectively) than with valsartan HCT (1.7%)