hospital were recruited. The patients were divided into three groups according to their risk factors. The patients without hypertension and diabetes were included into Group A (n=95). The patients with high blood pressure or diabetes were included into group B (n=221) and the patients with both of high blood pressure and diabetes were included into group C (n=72). Coronary artery calcification score, lipid profiles (lipoprotein (a), LDL, HDL, TG, TC) and coronary angiography were determined in each group.

Results Among the 3 groups, there is no significant difference between sex, drinking history, smoking history; there is significant difference between age and the incidence of coronary heart disease among the 3 groups (age F=5.737, p=0.005; coronary heart disease F=6.283, p=0.002. Coronary artery calcification score is significantly higher in group C than that of groups A (groups C 256.9±430.199 VS group A 103.74±299.85, p=0.011). Coronary artery calcification score was positively correlated with lipoprotein (a) (p=0.005), age (p=0.021) in group A. Coronary artery calcification score was positively correlated with low-density lipoprotein (p=0.018), age (p=0.000) in group B. There is no significantly correlation between coronary artery calcification score and lipid profiles in group C. Summary analysis coronary artery calcification score was positively correlated with LP (a) (p=0.013), low-density lipoprotein (p=0.021), age (p=0.000).

Conclusion In the low-risk coronary heart disease group, lipoprotein (a) is positively correlated with coronary calcification score, which suggests lipoprotein (a) is an independent risk factor for coronary artery calcification for these apparently low risk patients. The present study may contribute to the early diagnosis and intervention of coronary artery disease for those patients.

e0346 SCREENING OF SLEEP APNOEA-HYPOPNOEA SYNDROME FROM ECG DERIVED RESPIRATION OF AMBULATORY ECG

doi:10.1136/hrt.2010.208967.346

[1]Guangming Tong Guangming Tong, [2]Haicheng Zhang Haicheng Zhang, [2]Jihong Guo Jihong Guo, [3]Fang Han Fang Han. *[1]Department of Cardiology The Second Hospital Affiliated To Soochow University; [2]Department of Cardiology, Peking University Peoples Hospital; [3]Sleep Center of Peking University Peoples Hospital*

Objective To evaluate the feasibility of screening sleep apnoea-hypopnoea syndrome (SAHS) from ECG—derived respiration (EDR) of ambulatory ECG (AECG) monitoring.

Methods The overnight sleep investigation was administered to 80 subjects by polysomnogram (PSG) and 24 h AECG monitoring simultaneously during February through November, 2004. The ECG analysers did not know the PSG results at all. They were both asked to give the apnoea hypopnoea index (AHI) by EDR and PSG respectively. The PSG result was considered as the gold standard so as to evaluate the feasibility of screening SAHS from EDR of AECG monitoring.

Results The average age, male gender, body mass index, history of hypertension were higher in the SAHS (+) patients than those of the SAHS (-) patients. Automatic analysis was performed with software in a sensibility of 75%, 87.5% and 100% respectively. When software sensibility adjusted to 75%, the sensitivity of screening SAHS with EDR was 26.7%, with the specificity of 80%, the positive predictive value of 80%, the negative predictive value of 26.7%, the diagnose accordance rate of 40%. When software sensibility was adjusted to 87.5%, the sensitivity of screening SAHS with EDR was 55%, with the specificity of 45%, the positive predictive value of 75%, the negative predictive value of 25%, and the diagnose accordance rate of 52.5%. When software sensibility was adjusted to 100%, the sensitivity of screening SAHS with EDR was 88.3%, with the specificity of 35%, the positive predictive value of 84.1%, the negative predictive value of 50%, and the diagnose accordance rate of 75%.

Conclusion EDR technique of AECG was useful to screen the suspicious SAHS patients, sensitivity and the diagnosis coincidence rate was higher when the sensibility of automatic analysis software was adjusted to 100%.

e0347 THE CHANGES OF HEART RATE TURBULENCE (HRT) IN SLEEP APNOEA-HYPOPNOEA SYNDROME (SAHS)

doi:10.1136/hrt.2010.208967.347

Tong Guangming, Tong Guangming. *Department of Cardiology The Second Hospital Affiliated To Soochow University*

Objective We investigated the changes of heart rate turbulence (HRT) in sleep apnoea- hypopnoea syndrome (SAHS).

Methods 75 patients underwent overnight polysomnography for clinically suspected SAHS and simultaneous Holter monitoring (23:00—6:00), According to the apnoea-hypopnoea index (AHI), the patients were assigned to group SAHS (+) (AHI ≥5, n=52) or group SAHS (-) (AHI <5, n=23). HRT (onset, slope) of two groups were compared.

Results Turbulence slope (TS) of group SAHS (+) was significantly lower in group SAHS (-) (p<0.01), turbulence onset of two groups all smaller than zero, turbulence onset of group SAHS (+) were higher than group SAHS (-)'s, but no significant difference, the number of ventricular premature contractions of group SAHS (+) were more than group SAHS (-)'s, but also no significant difference.

Conclusions Heart rate turbulence phenomenon diminishes in sleep apnoea- hypopnoea syndrome patients, indicating demages in cardiac autonomic activity in SAHS, turbulence slope decreasing could be considered as prognosis index of SAHS.

e0348 THE EFFECTS OF VALSARTAN ON ANGIOTENSIN II TYPE 1 AND TYPE 2 RECEPTOR IN ISOLATED REPERFUSED ISCHAEMIC RAT HEARTS

doi:10.1136/hrt.2010.208967.348

Zhang Yingjie, Bai Xiaojuan, Qi Zhimin, Wang Hongxin. *Institute of Cardiology, the First Hospital Affiliated to Jinzhou Medical University, Jinzhou*

Object To determine the effects of Angiotensin II Type 1 receptor blockade valsartan on AT_1 and AT_2 receptor during ischaemia reperfusion.

Methods The hearts of 24 SD rats were isolated, linked to Langedorff perfusion apparatus, and randomly divided into 3 equal groups: control group, perfused with modified Kreb-Henseleit (K-H) buffer for 110 min; ischaemia/reperfusion (I/R) group, perfused with K-H buffer for 20 min, exposed to ischaemia for 30 min, and then reperfused with K-H buffer for 60 min; valsartan group, perfused with K-H buffer with valsartan for 20 min, exposed to ischaemia for 30 min, and then reperfused with K-H with valsartan for 60 min. The left ventricular (LV) function including maximal uprising velocity of left ventricular pressure ($+dp/dt_{max}$) and maximal decreasing velocity of left ventricular pressure ($-dP/dt_{max}$) were monitor. The coronary effluent were measured 20 min after the stabilisation of perfusion, and 20, 40, and 60 min after reperfusion. After the stop of reperfusion, the structure were observed using electron microscope. The AT_1 and AT_2 receptor mRNA express were examined by Northern blot. The AT_1 and AT_2 receptor protein expression were examed by Northern blot.

Results Compared with control, I/R impaired left ventricular systolic and diastolic function (+dp/dtmax 1892±231 mm $Hg.s^{-1}$ vs 836±223 mm $Hg.s^{-1}$; −dp/dtmax −1175±223 mm $Hg.s^{-1}$ vs −613±224 mm $Hg.s^{-1}$, all p<0.01), decreased coronary effluent (5.9±0.8 $ml.min^{-1}$ vs 3.3±0.5 $ml.min^{-1}$, p<0.01) damaged the

structure. Increased AT_1 receptor mRNA and protein. Decreased AT_2 receptor mRNA and protein express. valsartan improved left ventricular function ($+dp/dt_{max}$ 1337±226 mm $Hg.s^{-1}$; $-dp/dt_{max}$ −871±208 mm $Hg.s^{-1}$, compared with I/R group, all $p<0.01$), increased coronary effluent (4.2±Δ0.7 $ml.min^{-1}$, compared with I/R group, $p<0.01$). Increased AT_2 receptor mRNA and protein express with no changes in AT_1 receptor mRNA and protein express.
Conclusions AT_1 receptor blockade valsartan induces short-term cardioprotection associated with enhanced AT_2 receptor expression during myocardial ischaemia reperfusion.

e0349 CLINICAL OBSERVATION ON DIFFERENT DOSAGE OF VALSARTAN IN TREATMENT OF HEART FAILURE

doi:10.1136/hrt.2010.208967.349

Sun Yueling, Chen Su, Tu Yuanchao. *Xinhua Hospital of Hubei Province*

Objective To explore the clinical value of different dosage of valsartan in treatment of chronic heartfailure (CHF).
Methods 99 patient s with CHF were randomly divided into three groups: benazepril group (group A, 10 mg/d), conventional dose valsartan group (group B, 80 mg/d) and high dose valsartan group (groups C, 80 mg/d, 2 times per day). Levels of Angiotensin II (Ang II), aldosterone (ALD) and brain nat riuretic peptide (BNP) were detected, and the changes of left ventricular ejection fraction (LVEF) were measured before and 6 months after treatment.
Results BNP, ALD, Ang II were decreased significantly in 3 groups ($p<0.05$), while LVEF increased significantly ($p<0.05$) after the treatment. Compared with those of group A and B, BNP and ALD were significantly decreased while LVEF was significantly increased after treatment in group C ($p<0.05$). ALD in group B decreased significantly compared with that of group A ($p<0.05$), while the other indexes were not significantly changed.
Conclusions Valsartan, similar to benazepril, reverses ventricular remodelling and improves cardiac function, high dose valsartan reverses ventricular remodelling and improves cardiac function more effectively than benazepril and conventional dose valsartan.

e0350 EFFECTS OF PROBUCOL ON ANTI-OXIDISING AND ANTI-INFLAMMATION IN PATIENTS WITH ACUTE CORONARY SYNDROME

doi:10.1136/hrt.2010.208967.350

Yan Kaili, Liu Hanhua, Sun Yueling, Chen Su, Tu Yuanchao. *Xinhua Hospital of Hubei Province*

Objective To observe the effects of probucol on blood levels of oxidative low density lipoprotein antibody (oxLDL-Ab), high-sensitive C-reactive protein (hs-CRP) and interleukin-18 (IL-18) in patients with acute coronary syndrome (ACS).
Methods 81 patients with ACS were divided randomly into a Probucol treatment group (p group, n=41) and a routine treatment group (R group, n=40). OxLDL-Ab, hs-CRP and IL-18 were respectively measured in peripheral blood before therapy. The level of OxLDL-Ab was measured again after a 4-week treatment. The levels of hs-CRP and IL-18 were measured again after 1-week treatment. The frequency of typical angina of p group and R group in the last week of treatment was analysed.
Results The levels of oxLDL-Ab, hs-CRP and IL-18 were obviously lower in p group compared with R group after treatment ($p<0.05$). The frequency of typical angina of p group in the last week of treatment was obviously lower than that of R group, and this was closely correlated with the decreased oxLDL-Ab values ($p<0.05$).
Conclusion Probucol had anti-oxidant and anti-inflammatory action in patients with ACS.

e0351 RELATIONSHIP BETWEEN BRACHIUM-ANKLE PULSE WAVE VELOCITY AND 24HABPM, CONVENTIONAL BLOOD PRESSURE AND 24H ABPM IN PREHYPERTENSIVE SUBJECTS

doi:10.1136/hrt.2010.208967.351

Zhao Yingxin, Lu Fanghong, Liu Zhendong, Wang Shujian, Sun Shangwen. *Shandong Academy of Medical Sciences*

Objective To study the relationship between brachium-ankle pulse wave velocity and 24hABPM, conventional blood pressure and 24 hABPM in prehypertensive subjects.
Methods 210 subjects were enrolled with prehypertension. Conventional blood pressure, 24-h ABPM and baPWV were performed. The patients were divided into dipper and non-dipper according to the decrease rate of nighttime MBP.
Results 1) Conventional blood pressure was obviously higher than mean 24-h BP, mean daylight BP and mean nighttime BP ($p<0.05$). Conventional SBP was correlated with mean daylight BP ($r=0.431$, $p=0.023$), and with mean 24-h SBP ($r=0.282$, $p=0.037$). Conventional DBP was related to mean daylight DBP ($r=0.241$, $p=0.0397$), and related to 24-h blood pressure ($r=0317$, $p=0.018$). 2) baPWV was positive related to 24-h SBP, daylight SBP and PP, daylight and nighttime SBP load. 3) Conventional SBP was significant associated with daylight SBP ($r=0.577$, $p=0.022$) and 24-h SBP ($r=0.611$, $p=0.019$), and conventional DBP was significant related to daylight DBP ($r=0.582$, $p=0.184$) and 24-h DBP ($r=0.693$, $p=0.007$) in non-dipper prehypertensive patients. 4) baPWV was significant positive correlated with 24-h SBP, DBP, PP, daylight SBP, PP, SBP load, and nighttime SBP, PP, SBP load.
Conclusion There is a more value of 24-h ABPM in non-dipper prehypertensive patients than dipper prehypertensive patients. baPWV was closely correlation with 24-h SBP, daylight SBP and PP, daylight and nighttime SBP load in two groups.

e0352 EFFICACY AND SAFETY OF ALISKIREN IN CHINESE PATIENTS WITH MILD OR MODERATE ESSENTIAL HYPERTENSION

doi:10.1136/hrt.2010.208967.352

[1]Sun Ningling, [2]Zhu Junren. *[1]People's Hospital Peking University; [2]Zhongshan Hospital Shanghai*

To assess the antihypertensive efficacy and safety of aliskiren compared with ramipril in Chinese patients with mild or moderate essential hypertension.
Methods This is a double-blind randomised, multicenter, parallel group, active-controlled study. Following washout and single-blind placebo run-in period, 1147 patients with essential hypertension (mean sitting diastolic blood pressure [msDBP] ≥95 and 110 mm Hg) were randomised to receive either aliskiren 300 mg (n=288), 150 mg (n=284), 75mg (n=289) or ramipril 5 mg (n=286) for 8 weeks. Efficacy and safety were assessed at Week 2, 4 and 8 in treatment duration.
Results 994 (86.7%) completed the study. At week 8, aliskiren therapy produced greater mean blood pressure reductions compared with ramipril therapy. All aliskiren dose groups were statistically non-inferior ($p<0.0001$) to ramipril group in reducing msDBP. Aliskiren 300 mg group also showed statistically significantly superior reductions in msDBP and msSBP compared to ramipril 5 mg group ($p=0.0002$ and $p=0.0073$, respectively). Blood pressure