Methods 74 patients (93 stents) with OCT post-stent implantation were included in the study. Cross-sectional OCT images were analysed at 1-mm intervals (every 15 frames), and 302 cross-sectional images with lipid or calcific lesions under the stent struts were selected. The struts in these sections were divided into four groups according to the plaque conditions under the struts: group 1—struts on the normal vessel, group 2—on the fibrotic lesion, group 3—on the calcific lesion, group 4—on the lipid rich lesion. The neointimal hyperplasia thickness on the stent struts were measured by OCT.
Results The plaque conditions under 806 struts could be detected clearly by OCT. Among them, 157 struts were on the normal vascular wall (the intimal thickness were less than 250 μm by OCT), 344 struts were on the fibrotic lesions, 145 struts on calcific lesions and 160 struts on lipid lesions. The neointimal thickness were 0.132±0.081 μm, 0.148±0.091 μm, 0.150±0.105 μm and 0.166±0.088 μm respectively in group 1–4. The p value was 0.011.
Conclusions The plaque type has impact on the in-stent neointimal hyperplasia. The underlying lipid or calcific components in plaque may promote neointimal hyperplasia after stent implantation.

e0321 THE CORRELATION OF CARDIAC TROPONIN I AND DECOMPENSATED HEART FAILURE

doi:10.1136/hrt.2010.208967.321

Zhaoxiufen Sunxiaofei, Zhaoxiufen Sunxiaofei. *The First People's Hospital, Shan Dong Ji Ning*

Objective Correlation of Cardiac Troponin I and Decompensated heart failure. Small studies report that cTnI is elevated in severe heart failure (HF) and may predict adverse outcomes.
Methods Serial blood samples were instantly collected from 336 patients who presented Decompensated heart failure (NYHA class III-IV) at Admission. Patients with acute myocardial infarction or myocarditis were excluded from analysis. Measurement of cTnI and Brain natriuretic peptide (BNP), echocardiography was done after Disease condition Improved. cTnI was detectable (cTnI ≥0.40 ng/ml) in serum of 161 patients (47.9%). Patients with detectable cTnI levels had significantly higher B-type natriuretic peptide (BNP) levels ($p<0.001$). A significant correlation was found between detectable cTnI and progressive decline in ejection fraction over time. Furthermore, detectable cTnI was associated with increased mortality risk (RR, 2.57; 95% CI, 1.43 to 3.78). After adjustment of other factors associated with adverse prognosis including age, sex, ejection fraction, and coronary artery disease, cTnI remained a significant predictor of death. cTnI used in conjunction with BNP further improved prognostic value.
Conclusions cTnI is associated with elevated BNP levels and progressive left ventricular dysfunction in patients with severe HF. cTnI may be a novel, useful tool in identifying patients with HF who are at increased risk for progressive ventricular dysfunction and death.

e0322 TO INVESTIGATE INAPPROPRIATE DISCHARGE OF

doi:10.1136/hrt.2010.208967.322

Xinxia Zhang, Xuesong Hu, Xiangguang Xu, Weihua Fang, Changlong Pen. *Department of Cardiology, Shenzhen Futian Hospital*

Objective In order to avoid and decrease inappropriate discharge caused by implantable cardioverter defibrillators (ICD), we analysed the cause of inappropriate discharge.
Methods Clinical follow-up data of inappropriate discharges by ICD in 6 patients were studied. All the 6 patients were male, 2 were dual chamber ICD, while 7 were single chamber ICD. The patients were followed-up from 0.5 to 9 (averaged 4.5) years.
Results During follow-up, all the patients survived. Arrhythmias were detected 358 times, ICD treatment was performed 71 times, inappropriate discharges occurred 14 times. 2 patients who implanted ICD earlier experienced all the 14 inappropriate discharges. The causes of inappropriate discharges include over-sensing sinus tachycardia (3 times), electromagnetic interference (2 times), lead insulation breaks (9 times). They accounted for 21.4%, 14.2%, 64.2% of total inappropriate discharges, respectively.
Conclusion Inappropriate discharge of ICD should be taken seriously consideration.

e0323 ANALYSIS OF ADVERSE EFFECTS FROM STATINS-BASED MULTI-DRUG MEDICATION

doi:10.1136/hrt.2010.208967.323

Zhao Mei, Zhao Zhengdang, Shi Jin, Chen Yanli, Li Hong, Zou Deling, Ma Shumei, Li Xiaodong. *Deptartment of Cardiology, Shengjing Hospital of China Medical University*

Objective To investigate risk factors and possible mechanisms of adverse effects from statins-based multi-drug medication.
Methods The medical materials from eleven patients who suffered from adverse effects of statins-based multi-drug medication were collected and analysed.
Results 7 patients who took simvastatin 40 mg/day for mono-therapy for four weeks produced normal laboratory tests results. Four patients who took a combination of ezetimibe/simvastatin 10/40 mg/day for 4 weeks, 4 patients who took a combination of simvastatin 40 mg/day plus niacin for 8 weeks and 3 patients who took a combination of ezetimibe/simvastatin 10/40 mg/day plus niacin for eight weeks or less showed hepatic dysfunction (Alt>1.5ULN) and/or amyasthenia (CK>1.5ULN) and finally discontinued medication.
Conclusion For females, age, polypharmacy and drug interactions are very important risk factors for statins-based multi-drug medication. One of the possible mechanisms is that other interacting drugs competitively inhibit the common pathway by which the drugs are metabolised, resulting in increased statins exposure, subsequent hepatotoxicity and skeletal muscle toxicity.

e0324 PLATELET ACTIVATION DISTRIBUTION IN CHINESE HIGH RISK PATIENTS WITH ACUTE CORONARY SYNDROME

doi:10.1136/hrt.2010.208967.324

[1]Ren Yihong, [1]Chen Yundai, [1]Zhao Ming, [2]Chen Jinsong, [1]Chen Lian, [1]Liu Hongbin, [1]Wang Yu, [1]Snu Zhijun. *[1]PLA General Hospital/Cardiovascular Department; [2]PLA General Hospital, Clinical Laboratory*

Background All cases of ACS treated with the same doses anti-platelet remedy without considering their results from it is not an optimal remedy obviously. TEG-Mapping assay can offer us a possibility to detect the activity of platelet in general clinical therapy process.
Objectives To evaluate the antiplatelet therapy results immediately post- PCI in high risk ACS patients.
Methods All ACS patients (n=310) with elective PCI took aspirin loading dose 300 mg before PCI and followed by 100 mg/day and clopidogrel loading dose 600 mg before PCI and followed by 75 mg/day therapy. Potential and residual platelet activity in ADP and AA pathway were detected respectively after 24–48 h from PCI with modified TEG-mapping assay.

Results (1) Most of the people have a moderate maximal potential platelet activity except 7.1% with very low level and 14.3% with very high level potential platelet activity. (2) Through residual platelet activity detecting, it can be seen that patients who are sensitive in ADP pathway are not necessarily sensitive in AA pathway, and vice-versa. (3) The frequency percent from clopidogrel is 22.0% in inhibition rate of platelet activation less than 50% group, 18.8% in that more than 90% group. But that from aspirin is 14.6% and 26.5%, p=0.0778 between the two pathways.
Conclusions Potential platelet activities are not same in different patients; Residual platelet activities are also different; Even for the same patient, the platelet inhibition ability derived from Aspirin is different from that from Clopidegrel. These individual differences in platelet activity further prove the necessity for case by case analysis and remedy adjustment.

e0325 INFLUENCE OF PROBUCOL ON ENDOTHELIAL DEPENDENT VASODILATION REACTION IN PATIENTS WITH ACUTE CORONARY SYNDROME

doi:10.1136/hrt.2010.208967.325

Hong-Mei Dong, Lan Huang, Yao-Ming Song, Ai-Min Li, Jun Jin, Gang Zhao, Chun-Mei Lin, Chun-rong Tao. *Xinqiao Hospital, Third Military Medical University*

Objective The study tested the antioxidant probucol for endothelial dependent vasodilation reaction in the patients of ACS after received therapy.
Methods 51 ACS patients were divided randomly into a probucol treatment group (p) and a routine treatment group (C). Oxidised low-density lipoprotein (ox-LDL) was measured in peripheral blood by Sandwich ELISE method. The brachial arterial hyperaemia-induced flow mediated dilation (FMD) and sublingual nitroglycerin (NTG) mediated vasodilation were measured by high resolution ultrasound. These variables were analysed after received probucol 3 months.
Results The level of FMD with probucol treatment group was significantly increased after 3 months compared to pretreamented ($p<0.05$), while the level of ox-LDL in peripheral blood in ACS patients was markedly diseased ($p<0.01$). The FMD with probucol treatment group was significantly increased compared to ACS routine treatment group ($p<0.05$), while the level of ox-LDL was markedly desaesed ($p<0.01$). The linear correlation analysis showed that plasma ox-LDL was a negative correlation with FMD in after treatmented patients by probucol with ACS ($r=-0.517$, $p<0.001$).
Conclusions It was important that vascular endothelial function and endothelial dependent vasodilation reaction may be improved in the ACS patients of after the antioxidant probucol therapy.

e0326 EFFECTS OF HYDROGEN SULFIDE ON PROLIFERATION OF BONE MARROW DERIVED ENDOTHELIAL PROGENITOR CELLS IN MICE

doi:10.1136/hrt.2010.208967.326

Li Wei, Li Ai-min, Wang Hang, Zhu Jin-kun, Huang Lan. *Department of Cardiology, Xinqiao Hospital, Third Military Medical University, Chongqing, China*

Hydrogen sulfide (H_2S) is found to be the third endogenous gaseous transmitter and plays an important role in many systems of organism. In cardiovascular system, H_2S is produced endogenously by cystathionine gamma-lyase (CSE). The CSE/H_2S system executes the physiological function of vasorelaxation, inhibition of vascular remodelling and cardioprotection. It is also concerned with variety of cardiovascular diseases such as hypertension and pulmonary hypertension. These results suggest that H2S may be a novel cardiovascular functional regulator. And, at another hand, EPCs incorporate into the process of injured carotid reendothelialisation. EPCs transplantation induces an increase in the circulating EPCs, accelerates the process of endothelial repairmen and reduces neointima formation.
Objective To study whether hydrogen sulfide has effects on endothelial progenitor cells (EPCs).
Methods Total mononuclear cells (MNCs) isolated from bone marrow by density gradient centrifugation combined with adherence cells filtration were plated on fibronect in coated culture dishes. After 7 days, adherent cells were kept with different concentrations of hydrogen sulfide for 48 h. EPCs proliferation, migration ability and adhesion assay was performed: EPCs apoptosis was induced by paclitaxel or serum starvation for 48 h, apoptosis was determined by TUNEL method and flow cytometry.
Results Incubation of hydrogen sulfide dose dependently increased the number of EPCs ($p<0101$): hydrogen sulfide improved EPCs proliferation, migration and adhesive capacity ($p<0.01$), and hydrogen sulfide could protect EPCs from paclitaxel or serum starvation-induced apoptosis ($p<0.01$).
Conclusions Hydrogen sulfide can increase the number of bone marrow derived EPCs and improve their biological characteristics.

e0327 PREVENTION THROMBOEMBOLISM USING WARFARIN FOR

doi:10.1136/hrt.2010.208967.327

Li Xiaoming, Zhang Yuean, Gao Bingbing, Li Bao, Wu Weihua. *Shanxi Cardiovascular Disease Hospital*

Objective To identify the risk factors of thromboembolism related to atrial fibrillation (AF) in difference structural heart disease and prevention of thromboemboembolism with warfarin.
Methods 285 consecutive cases with AF, of which 110 were rheumatic heart disease (RHD), and 57 received prosthetic heat valve, and 53 received medicine therapy; of which 67 were hypertension; of which 35 were patients without structural heat disease; of which 26 were patients with sick sinus syndrome who are receiving a pacemaker for symptomatic bradycardia of which 16 were ischaemic heart disease; of which 15 were dilated cardiomyopathy; of which 10 were congenital heart disease; of which 8 were other disease. Clinical data including gender; age; incidence of left atrial (LA) thrombus; incidene of thromboembolism or history of stroke or transient ischaemic attack (TIA); incidence of using warfarin and dose of warfarin; events of death.
Results Incidence of left atrial (LA) thrombus (21.8%) and incidence of thromboembolism or history of stroke or transient ischaemic attacck (TIA) (9.1%) in RHD group were significantly higher than those in other group (0–4%) ($p<0.001$); incidence of using warfarin in RHD group (94.5%) were significantly higher than those in other group (61.7%) ($p<0.05$).
Conclusion Antithrombotic therapy is key and essential treatment in AF with one high or two moderate risk factors. RHD and prosthetic heart valve is high risk factor of LA thrombus and thromboembolism. 7 patients of AF with hypertension and ischaemic heart disease have thromboembolism, but only one patient by transthoracic echocardiography (TTE) have LA thrombus. So transesophageal echocardiogram is done. AF in whom anticoagulation is indicated to use warfarin. The target International Normalised Ratio (INR) range is 2.0–3.0, but while combination of warfarin and amiodarone the dose of warfarin is less than average dose.