Methods One thousand four hundred and six consecutive patients, who underwent CAG at Daxing hospital from February 2007 through to March 2010 were enrolled. Of the 1406 patients, 351 patients were diagnosed as type 2 diabetes mellitus, 1055 patients were diagnosed as non-diabetic mellitus after admission to hospital. By evaluating the coronary angiogram, the patients were not diagnosed to have coronary heart disease (CHD) with less than 50% diameter stenosis of coronary artery; CHD was defined as narrowing of the appropriate lumen of ≥50%; the procedure of percutaneous coronary intervention (PCI) were performed in the patients with more than or equal to 70% stenosis; the coronary aortic bypass graft (CABG) surgery had been proposed in patients with left main coronary artery lesions, left main equivalent, diffuse triple coronary artery lesions, two-vessel disease with significant proximal left anterior descending CAD, however the determinations of the therapeutic choice were combined with clinical data.
Results The baseline characteristics of patients with and without diabetics undergone coronary angiography were as following. The age was significantly older in patients with diabetes than without diabetes (60.22±9.70 vs 57.76±9.94, p<0.0005). More femal patients in the diabetes group than non-diabetes group (45.30% vs 35.55%, p<0.0005). The morbidity rate of UAP (64.96% and 49.86%, p<0.0005), and Hypertension (80.06% and 69.57%, p<0.0005) were significantly higher in patients with diabetes than without diabetes. By evaluating the coronary angiogram, more patients were diagnosed to CHD in the diabetes group than in the non-diabetic group (92.59% vs 79.43%, p<0.0005); the proportion of the population of the patients with CHD not indicated for PCI was almost identical in the two groups (23.30% vs 25.97%, p=0.33); the proportion of the patients with CHD performed the procedure of stent implantation (including the patients receiving follow-up coronary angiography after stenting) were not differ significantly between the two groups (35.61% vs 32.61%, p=0.30); more patients with CHD were proposed to perform the CABG in the diabetes group than in the non-diabetic group (31.91% vs 17.35%, p<0.0005).
Conclusion The morbidity rate of coronary heart disease among patients with type 2 diabetes is greater than non-diabetes, patients with type 2 diabetes have a significantly higher rate of coronary artery bypass grafting which had been proposed.

e0467 THE IMPACT OF DIABETES ON LONG TERM FOLLOW UP OF THE PATIENTS WITH CHRONIC TOTAL OCCLUSION POST PERCUTANEOUS INTERVENTION

doi:10.1136/hrt.2010.208967.467

Liu Wei, Wagatsuma Kenji. *Toho University Omori Hospital*

The prognosis of patients with chronic total occlusion (CTO) and diabetes mellitus treated with percutaneous coronary intervention (PCI) is not well known.
Methods From Jan 2001 to April 2009, 105 cases of CTO successfully treated with PCI were included. 31 patients with diabetes and 74 without diabetes were compared for angiographic and clinical outcomes (mean follow up 36±21 month). Death, myocardial infarction and repeat PCI or coronary artery bypass surgery were considered as a combined primary endpoint.
Results 25 diabetes patients (78%) and 67 non-diabetic patients (89%) were treated by drug eluting stent (p=0.37). The primary endpoint occurred in 22% (n=7) of diabetes patients, 10.8% (n=8) of the patients without diabetes (p=0.059; Log rank test), Cox regression showed patients with diabetic group and moderately or severely reduced renal impairment had significant increased risk for MACE (HR: 6.34, 95% CI 2.06 to 19.56, p<0.001).
Conclusions Our study showed patients with CTO and diabetes have a tendency of poor prognosis after PCI, which may be largely due to the complicated renal impairment.

e0468 EFFECT OF DIFFERENT LOADING DOSES OF ATORVASTATIN ON PERCUTANEOUS CORONARY INTERVENTION FOR ACUTE CORONARY SYNDROMES

doi:10.1136/hrt.2010.208967.468

Sun Yujiao, Qi Guoxian, Gao Yuan, Zhang Haishan, Pang Xuefeng, Zhao Weihua, Zhang Zixin. *Department of Cardiology, The First Affiliated Hospital of China Medical University*

Background Percutaneous coronary intervention (PCI)-induced myocardial damage is a major cause of late cardiovascular events. Treatment with atorvastatin before PCI can reduce myocardial damage during the peri-PCI period. Objectives: To compare the safety and myocardial effects of different atorvastatin loading doses and dosing frequency before PCI in non-ST-segment elevation acute coronary syndrome (NSTE-ACS) patients.
Methods 80 NSTE-ACS patients were randomly divided into four groups (20 patients/group). The control group was given 40 mg atorvastatin each night. The three loading dose groups were treated as in the control group, but were given 80 mg atorvastatin 12 h before PCI (low-load group) in combination with 40 mg atorvastatin 2–4 h before PCI (mid-load group) or 60 mg atorvastatin 2–4 h before PCI (high-load group). All patients underwent PCI within 48–72 h of admission, and received 40 mg atorvastatin for at least 1 month after PCI. Changes in myocardial markers and high sensitive C-reactive protein (hs-CRP) were analysed. Patients were followed-up for 30 days to monitor the incidence of major adverse cardiac events (MACE).
Results No deaths or revascularisations were recorded. The incidences of MACE differed significantly between the four groups (40%, 25%, 10% and 0%, respectively, p<0.05). The incidence of MACE and cardiac troponin I (cTnI) level above the normal range, and post-PCI increases in creatine kinase-myocardial bank (CK-MB) and hs-CRP were significantly higher in the control group than in the high-load group (all, p<0.007). The post-PCI cTnI and CK-MB levels were similar to the pre-PCI levels in the high-load group, but increased significantly in the control and low-load groups. The magnitude of the hs-CRP level increased was significantly lower in the high-load group than in the control and low-load groups. The post-PCI alanine aminotransferase levels in all four groups were significantly higher than the pre-PCI levels, but were within normal ranges. No myalgia or myasthenia was observed.
Conclusion This study shows that short-term atorvastatin loading before PCI was well tolerated had beneficial myocardial effects in patients with NSTE-ACS.

e0469 MULTIMODALITY IMAGING EVALUATION OF FUNCTIONAL AND CLINICAL BENEFITS OF PERCUTANEOUS CORONARY INTERVENSION ON PATIENTS WITH CHRONIC TOTAL OCCLUSION LESION

doi:10.1136/hrt.2010.208967.469

Dongdong Sun, Yue Tian, Jing Wang, Zhu Shunming, Yi Huan, Wejie Li, Feng Cao. *Department of Cardiovascular Medicine, Radiology & Nulclear Medicine, Xijing Hospital, Fourth Military Medical University, China*

Aims To determine the effects of percutaneous coronary intervension (PCI) on cardiac perfusion, cardiac function and quality of life in patients with chronic total occlusion (CTO) lesion in left anterior descending (LAD) coronary artery.

Methods 37consecutive patients with CTO lesion in LAD coronary artery who underwent PCI as well as SPECT/CTA fusion imaging were divided into the following three groups based on the myocardial perfusion index before PCI: (A) no severe cardiac perfusion defects (n=4); (B) reversible cardiac perfusion defects (n=18); (C) irreversible cardiac perfusion defects (n=15).
Results Overall successful rate of recanalisation for CTO was 75.7% (28/37). No statistical difference of perfusion abnormality was observed 6 months after PCI in group A. In group B, SPECT/CTA fusion imaging demonstrated that cardiac perfusion abnormality was significantly decreased 6 months after PCI (21±7.9% vs 28±9.8%, p<0.05). Left ventricular ejection fraction (LVEF) significantly enhanced as evaluated by echocardiography (51±8.3 % vs 43±6.2 %, p <0.05) as well as SPECT (50±7.7% vs 45±8.5%, p<0.05) compared with baseline. Quality of life improved as evidenced by 6-min walk distance (6MWD) (426.4±33.8 m vs 347.3±24.6 m, p<0.05) and angina pectoris score index (60.8±13.5 vs 53.7±11.2, p<0.05). Moreover, patients in group C also benefited from PCI therapy: a decrease in cardiac perfusion abnormality, an increase in LVEF and an improvement in quality of life.
Conclusion PCI exerts long-term functional and clinical benefits in patients with CTO lesion in LAD coronary artery, particularly in patients with reversible cardiac perfusion defects. SPECT/CTA fusion imaging may serve as a gatekeeper to evaluate the outcomes of patients with CTO lesion in LAD coronary artery.

e0470 ULTRASOUND GUIDED THROMBIN INJECTION FOR THE TREATMENT OF IATROGENIC POSTCATHETERISATION PSEUDOANEURYSMS IN 76 CASES

doi:10.1136/hrt.2010.208967.470

[1]Guo Jincheng, [2]Ma Changsheng, [1]Xu Min, [1]Wang Guozhong, [1]Zhang Zhenghai, [1]Zhang Linxin. *[1]Luhe Hospital; [2]An Zhen Hospital*

Ultrasound-Guided Thrombin Injection For The Treatment Of Iatrogenic Post-Catheterisation Pseudoaneurysms In 76 Cases Objective The purpose of this study was to evaluate the safety and efficacy of ultrasound-guided thrombin injection (UGTI) for the treatment of iatrogenic post-catheterisation pseudoaneurysms (PSAs).
Methods A total of 76 patients (36 men, 40 women, 63.4±10.8 years) with iatrogenic PSAs were treated by UGTI.
Results The mean diameter of the aneurysms was (3.01±1.27)×(1.65±0.67) cm, 93.4% (71/76) of the patients were under antiplatelet therapy with aspirin or clopidogrel or both, and additional low molecular weight heparin. The mean dose of bovine thrombin was 619±259 (150～1400) u, single injection was primary successful in 69 patients, of which thrombus formation occurred in 1 patient in the superficial femoral artery after successful closure of the PSA, surgical embolectomy was performed. A second injection was required in 2 of the remaining 7 patients. 5 patients were treated by ultrasound-guided compression because of incomplete thrombosis after UGTI. 1 patient had acute allergy after 2 min of thrombin injection which was resolved by antiallergic therapy. The total success rate was 98.7% (75/76). reperfusion was detected in 4 patients within 72 h follow-up, recurrence rate of UGTI for PSAs was 5.3% (4/75), 3 patients were successfully managed by a second thrombin injection and another was treated with ultrasuound-guidance compression, there is no recurrence at 30days clinical follow up. ultrasound follow-up. At the 2 months were performed in 15 patients. The size of PSAs were significantly reduced from (2.90±1.17), (1.47±0.54) cm to (0.94±0.72)(0.44±0.35) cm (p<0.001).
Conclusion UGTI is a safe, rapid, well-tolerated and effective noninvasive method for the treatment of iatrogenic PSAs and should be considered as first-line therapy.

e0471 CLINICAL INVESTIGATION OF TRANSRADIAL APPROACH FOR EMERGENT PERCUTANEOUS CORONARY INTERVENTION IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION

doi:10.1136/hrt.2010.208967.471

Xuguang Qin, Chengjie Gong, Weiguo Xiong, Chunpeng Lu. *Department of Cardiology, First Affiliated Hospital of Tsinghua University. Beijing, China*

Objective To evaluate the safety and efficacy of transradial approach for emergent percutaneous coronary intervention in patients with acute myocardial infarction.
Methods We analysed data from our single-center registry on 560 consecutive patients between January 2001 and October 2009. All the patients were respectively randomised to transradial group (n=260) and trans-femoral group (n=300). A dedicated doctor was appointed to collect such indicators as follows: puncture time, CAG time, PCI time, x-ray exposure time, complication rates associated with puncture such as puncture site bleeding, haematoma, pseudoaneurysm, and the major adverse cardiac events.
Results 1. There were no significant differences in the baseline characteristics and angiographic findings between two groups. 2. There was no significant differences in CAG time (8±2.4min vs 7.6±2.0min), PCI time (30±4.8min vs 28.6±4.4 min), and x-ray exposure time (4.6±1.4 min vs 4.4±1.3 min) between two groups. 3. The complication rates of TRA was 2.32%(6/260), compared to 6.0% (18/300) in the control group (p<0.05).
Conclusion Transradial approach for emergent percutaneous coronary intervention in patients with acute myocardial infarction is safe and efficacy, and it is suggested that the transradial approach should be used in patients with acute myocardial infarction.

e0472 TWO-YEAR CLINICAL EFFICACY OF SIROLIMUS—VERSUS PACLITAXEL—VERSUS ZOTAROLIMUS-ELUTING STENTS IN DIABETIC PATIENTS

doi:10.1136/hrt.2010.208967.472

[1]Kang-Yin Chen, [2]Seung-Woon Rha, [3]Yong-Jian Li, [1]Guang-Ping Li, [1]Ji-Young Park, [1]Sureshkumar Ramasamy, [1]Kanhaiya Poddar, [1]Byoung Geol Choi, [1]Yun Kyung Kim, [1]Jin Oh Na, [1]Cheol Ung Choi, [1]Hong Euy Lim, [1]Jin Won Kim, [1]Eung Ju Kim, [1]Chang Gyu Park, [1]Hong Seog Seo, Dong Joo Oh. *[1]Korea University Guro Hospital; [2]Tianjin Nankai Hospital; [3]The Second Hospital Of Tianjin Medical University*

Background Drug-eluting stents (DESs) have drastically improved the angiographic and clinical outcomes of percutaneous coronary intervention (PCI) in patients (pts) with diabetes mellitus. However, little has been known whether the different types of DESs have similar efficacy in Asian diabetic pts.
Methods A total of 305 diabetic pts who underwent PCI with Sirolimus (SES group; Cypher, n=102 pts, 247 lesions), Paclitaxel (PES group; Taxus, n=138 pts, 414 lesions) or Zotarolimus (ZES group; Endeavour, n=65 pts, 138 lesions)-eluting stents were enrolled. Angiographic outcomes at 6 months and cumulative clinical outcomes up to 2 years were compared among these 3 groups.
Results These 3 groups had similar baseline clinical and procedural characteristics except that SES group had longer stent length and PES group had smaller stent diameter as compared with other groups. Six-month angiographic outcomes showed that SES group had less binary restenosis, lower restenosis percent, and late loss as compared with the other 2 groups. Major clinical outcomes were similar among the 3 groups up to 2 years except a trend towards lower incidence of TVR in SES group as compared with the other 2 groups. ZES group had 1 acute, 1 subacute, and 1 late stent thrombosis (ST), while the other 2 groups didn't have ST throughout the follow-up period (Table).