GW25-e4356
Relationship between hypersensitivity to clopidogrel and in stent restenosis in patients undergoing percutaneous coronary intervention
Fu Zhenhong, Wei Dong, Hao Xue, Jun Guo, Chen Yundai
Chinese People’s Liberation Army General Hospital

Objectives: The relationship between hypersensitivity to clopidogrel and in stent restenosis (ISR) was analyzed, and the cut-off value of hypersensitivity to clopidogrel for ISR was evaluated.

Methods: 861 consecutive patients enrolled and patients’ inhibition rates in arachidonic acid (AA) and adenosine 5’-diphosphate (ADP) pathways were measured by thrombelastography (TEG) system. Patients were divided into ISR and non-ISR groups according to the results of coronary angiography.

Correlation between hypersensitivity to clopidogrel and ISR was analyzed.

Results: 249 patients were in ISR group and 612 patients were in non-ISR group. The average interval from the first PCI to the second CAG was 13 (IQR:9-16) months. The frequency of clopidogrel hypersensitivity in ISR group was significantly higher than that in non-ISR group (P<0.01). Inhibition rates in AA and ADP pathways in ISR group were lower than those in non-ISR group (P<0.01). The inhibition rate in ADP pathway was inversely correlated with (r<0.001) the severity of ISR. clopidogrel hypersensitivity was an independent risk factor of ISR (HR 6.62, 95% CI 2.84-15.49, P<0.001). ROC curve analysis showed that the predictive cut-off value of the inhibition rate in ADP pathway for ISR was 10.1%.

Conclusions: The inhibition rate in ADP pathway is inversely related to the ISR severity. Clopidogrel hypersensitivity is an independent risk factor for ISR and can predict the risk of ISR.

GW25-e4571
The effects of a loading-dose of atorvastatin before primary percutaneous coronary intervention on coronary flow and serum sCD40L in patients with ST-segment elevation myocardial infarction
Wu Mingwei, Yang Yang, HuaLiang Liu
The General Hospital of Chinese Armed Police Forces

Objectives: The purpose of this paper was to evaluate the effect of a loading-dose treatment of atorvastatin before primary percutaneous coronary intervention on coronary flow and serum sCD40L in patients with ST-segment elevation myocardial infarction.

Methods: From May, 2012 to October, 2013 STEMI patients who prepared to perform primary PCI were screened. They were randomly divided into three groups were 16.18±4.52, 18.25±3.02, 18.66±4.17 respectively, P<0.022. Serum sCD40L level of A group was lower than those in B and C group (P<0.001). The serum levels of sCD40L were recorded at 24h, 7d, 30d after PCI. The ratio of operation TIMI flow grade and corrected TIMI frame count were recorded. Drug safety included elevated liver enzymes (more than 3 times the upper limit of normal value), myalgia, rhabdomyolysis, gastrointestinal reaction and rash.

Results: A total of 198 STEMI patients were screened during our study. Ultimately 136 patients were randomly assigned to group A (N=48), group B (N=43), and group C (N=45). (1) The baseline data, angiography results, PCI procedure and medication among the 3 groups were not statistically different and were comparable. (2) Comparison of serum sCD40L level among the three groups: No significant difference was found among the 3 groups on the serum sCD40L levels (P<0.05). 24 hours after PCI, the level of serum sCD40L (x±s, ng/ml) three groups were 16.18±4.52, 18.25±3.02, 18.66±4.17 respectively, P<0.022. Serum sCD40L level of A group was lower than those in B and C group (P<0.001). There was no statistical significance difference between B and C group (P>0.05). 7 days after PCI, the level of serum sCD40L (x±s, ng/ml) three groups were 3.92±1.44, 4.63±1.68, 4.68±1.51 respectively, P=0.035. Serum sCD40L level of A group was lower than those in B and C group (P<0.05). There was no statistical significance difference between B and C group (P>0.05). 30 days after PCI, no statistically significant difference among the three groups on the serum sCD40L levels were found (P>0.05). (3) Immediate coronary flow after primary comparison among the three groups: There was no statistical difference among the three groups on the ratio of reached TIMI flow grade 3 (P>0.05). The immediate postoperative cTFC (Corrected TIMI frame count) in three groups (x±s) were 25.44±12.07, 30.98±12.09, 33.49±14.56, respectively. The differences among three groups reached statistical significance. The differences between group A and group B, group A and group C both reached statistical significance (P<0.05). No significant difference between group B and group C was found (P>0.05). The cTFC of A group was lower than that of B and C group. (4) Drug safety reports: there were no significant difference among three groups on the occurrence of drug adverse reactions, the changes of liver enzyme and creatine kinases was during the study.

Conclusions: For STEMI patients who undergoing primary PCI, a loading-dose of atorvastatin before PCI could reduce serum sCD40L level, improve coronary flow and did not increase the incidences of adverse events.

GW25-e4584
The safety and efficacy of dual-axis rotational coronary angiography in the diagnosis of coronary artery disease
Yang Shengli, Hai Liang Liu
Department of Cardiology, General Hospital of Chinese People’s Armed Police Forces, Beijing, China

Objectives: This study evaluates the efficacy and safety of Dual-axis rotational coronary angiography (DARCA) (X-per Swing) in the diagnosis of coronary artery disease.

Methods: From March to July in 2010, consecutive 79 patients undergoing diagnostic coronary angiography were randomized to either standard angiography group (n=39) or X-per Swing angiography group (n=40). We measured the quantity of contrast utilized and radiation exposure.

Results: Both groups were successfully completed angiography. There was a 44% reduction in contrast utilization in the X-per Swing group compared to the standard group (29.2±5.06 ml vs. 52.0±12.05 ml, P<0.001). Additionally, there was a 50% reduction in radiation exposure in the X-per Swing group compared to the standard group (6900±3443.03 mGy cm² vs. 16857±8584.68 mGy cm², P<0.001). Neither arhythmia nor chest pain differed in both groups. X-per Swing can provide a significant reduction of contrast and radiation exposure while maintaining comparable diagnostic accuracy and safety. With an auto-inject system (ACIST CMS2000) that can autoinject contrast by interlinkage, operator can stay far away from X-ray tube, which enable the X-ray exposure to be extremely reduced.

Conclusions: X-per Swing represents a new angiographic technique which is equivalent in terms of image quality and is associated with less contrast use, radiation exposure and procedural time than SA.

GW25-e4518
Serum Cystatin C Level Not Associated with Coronary Artery Plaque Vulnerability Analyzed by Optical Coherence Tomography
Jin Qinhu, Chen Yun Dai
Chinese PLA General Hospital

Objectives: Cystatin C, which is an endogenous marker for renal function, is reported to be a novel marker for coronary atherosclerosis. Some studies showed that lower cystatin C levels may be associated with increased severity of CAD in clinically stable patients, whereas higher levels may indicate the presence of any vulnerable plaque. To evaluate the relationship of Serum Cystatin C level and the coronary artery plaque vulnerability assessed by OCT in patients with coronary artery disease.

Methods: Eighty-two patients with chest pain underwent OCT assessment after coronary angiogram, all the lesions with diameter stenosis ≥30% and <100% were analyzed. The serum Cystatin C levels were measured, and the variables of plaque vulnerability, rupture, fibrotic cap thickness, micro channel in plaque were analyzed by OCT.

Results: One hundred and thirty seven lesions were analyzed, the Cystatin C levels didn’t exist significant difference between the patients with vulnerable plaques and stable plaques (P=0.918), no difference between the ruptured plaques or no ruptured plaques (P=0.990), between plaques with micro channel or not (P=0.570); There were no relationship between the Cystatin C level and fibrous cap thickness (r=0.233).

Conclusions: In our study, we haven’t found the relationship of Cystatin C level and plaque vulnerability assessed by OCT.

GW25-e0291
Staged PCI combined with optimized medical therapy for multivessel disease in acute myocardial infarction
Wang Qingsheng, Wang Qingsheng
The First Hospital of Qinhuangdao

Objectives: In acute myocardial infarction (AMI) and multivessel disease, it was unknown whether short-term percutaneous coronary intervention (PCI) for non-infarct related artery (IRA) was better than ischemia related PCI accompanied with optimized medical therapy.

Methods: This was a retrospective study. From 2009 to 2011, 288 patients with AMI and multivessel disease were enrolled who were undergoing primary PCI and assigned