increase concentration 10%, 15%, 20% and 25% within 24 to 48 hours after contrast media exposure was detected in 47 patients (17.67%), 35 patients (13.16%), 24 patients (9.02%) and 16 patients (6.02%), respectively. By logistic regression analysis, the independent predictor of major adverse events was cutoffs defined as increase in Cr/C 10% or sCr 25% (odds ratio 3.89; 95% confidence interval, 1.20 to 12.54; P = 0.02).

Conclusions: In patients undergoing percutaneous coronary intervention, cystatin C in combination with creatinine seems to be a reliable marker for the early diagnosis of contrast-induced acute kidney injury, and an independent predictor of MACEs.

**GW25-e2330**

Accelerated endothelialization with a CD105 antibody-coated stent

Cui Song1, Jing-Hua Liu1, Xian-Tao Song1, Chao Ding2, Li-Jun Meng3, Shucheng Li4

The Key Laboratory of Remodeling-Related Cardiovascular Diseases, Department of Cardiology, 1Department of Cardiology, Huimin County People’s Hospital, Binzhou 251700, China, 2Department of Cardiology, Binzhou Central Hospital, Binzhou 251700, China

Objectives: Endoglin/CD105 is an accessory protein of the transforming growth factor-β receptor system that plays a critical role in proliferation of endothelial cells and neovascularization. Here, we aimed to assess the effect of novel stents coated with antibodies to endoglin (ENDs) on coronary neointima formation.

Methods: Thirty ENDs, thirty CD34 stents (CD34s), thirty sirolimus-eluting stents (SESs), and thirty bare metal stents (BMSs) were randomly assigned and placed in the coronary arteries in 40 juvenile pigs. Histomorphometric analysis and scanning electron microscopy were performed after stent implantation.

Results: Our results showed that after 7 days, there was no difference in the neointimal area and percent area stenosis in ENDs compared with CD34s or SESs or BMSs. After 14 days, the neointima area and percent area stenosis in ENDs and CD34s and SESs were markedly decreased than those in BMSs (P < 0.05). Moreover, the percentage of reendothelialization was significantly higher in ENDs and CD34s than that in SESs or BMSs (P < 0.05) at 7 and 14 days. There was no difference in the neointima area and percent area stenosis and percentage of reendothelialization in ENDs compared with CD34s. The artery injury and the inflammationscores were similar in all groups at 7, 7 and 14 days.

Conclusions: In conclusion, similar to CD34s, our results demonstrated for the first time to our knowledge that endoglin antibody-coated stents can markedly reduce restenosis by enhancing reendothelialization in the porcine model and potentially offer a new approach to prevent restenosis.

**GW25-e2475**

Prevention of contrast-induced Nephropathy with l-carnitine in Coronary Heart Disease Patients with Diabetes Mellitus undergoing percutaneous coronary intervention

Li Wenhua, He Haiyan, Wang Lin, Chen Jing, Yu Yaren, Qian Wenhou, Liu Jiuli, Li Dongye

Affiliated Hospital of Xuzhou Medical College

Objectives: To evaluate the safety and efficacy of l-carnitine in prevention of contrast-induced nephropathy (CIN) in coronary heart disease (CHD) patients with diabetes mellitus (DM) undergoing percutaneous coronary intervention and assess the value of determination of urine kidney injury molecule-1 (KIM-1) protein concentration in the early diagnosis of CIN.

Methods: A single-center prospective randomized controlled trial was performed. 145 CHD patients with DM were divided randomly into groups control (n = 73, receiving only 0.9% sodium chloride solution for routine hydration) and intervention (n = 72, based on routine hydration receiving l-carnitine 3 g to join saline 250 ml of intravenous infusion in 0.9% sodium chloride 3d before operation). The renal function of all patients were accessed before and 1-2 days after operation, and on day 1, 2, respectively, after operation). All entrants in surgery on regular saline 250 ml of intravenous infusion in 0.9% sodium chloride 3d before operation.

Results: The two groups were well matched for baseline characteristics, the average amount of contrast medium during operation. There were 19 cases of CIN of the 145 patients (13.1%). The incidence of CIN was 19.2% (14/73) in patients (9.02%) and 16 patients (6.02%), respectively. By logistic regression analysis, the independent predictor of major adverse events was cutoffs defined as increase in Cr/C 10% or sCr 25% (odds ratio 3.89; 95% confidence interval, 1.20 to 12.54; P = 0.02).

Conclusions: In patients undergoing percutaneous coronary intervention, cystatin C in combination with creatinine seems to be a reliable marker for the early diagnosis of contrast-induced acute kidney injury, and an independent predictor of MACEs.

**GW25-e2478**

Clinical Study of Coronary Artery Lesion in Patients With Angina Pectoris by Virtual Histology Intravascular Ultrasound

Wang Xiaomei, Zhang Jian

TJED International Cardiovascular Hospital, Cardiovascular Clinical College of Tianjin Medical University

Objectives: To observe the characteristics of coronary artery lesion in patients with unstable and stable angina by virtual histology intravascular ultrasound.

Methods: A total of 199 patients with angina pectoris were enrolled in our study, they were divided into stable angina group (101 cases) and unstable angina pectoris group (98 cases) according to clinical symptoms, ECG and myocardial enzyme. Coronary angiography to determine the “criminals” vessels. Comparison of the coronary artery lesions’ indicators in minimal lumen area measured by grayscale and virtual histology intravascular ultrasound were made between the unstable angina group and stable angina group respectively. grayscale intravascular ultrasound index: external elastic membrane (EEM), lumen cross-sectional area (LA), plaque area (PA), plaque burden (PB), remodeling index (RI), plaque eccentricity index (EI). Virtual histology intravascular ultrasound index: neointima area, plaque composition of calcified tissue, fibrous tissue, lipid tissue and necrotic tissue.

Results: Two sets of results at the external elastic membrane area, lumen area, plaque area, eccentricity index, remodeling index have no significant difference (P< 0.05). Compared with stable angina group, unstable angina pectoris group in minimal lumen area have larger external elastic membrane area, smaller lumen area, greater plaque area, the greater the eccentric index and remodeling index. Necrotic core area (red) area and percentage of lesion composition in unstable angina group was significantly higher than that in stable angina group (P< 0.05). Two sets of results at lipid and calcification area and plaque distribution percentage have no statistically significant differences (P> 0.05). Two sets of results at lipid and calcification area and plaque distribution percentage have no statistically significant differences (P> 0.05). Two sets of results at lipid and calcification area and plaque distribution percentage have no statistically significant differences (P> 0.05). Two sets of results at lipid and calcification area and plaque distribution percentage have no statistically significant differences (P> 0.05).

Conclusions: The results showed that the level of KIM-1 before and 24, 48h after operation positively correlated with Scr at the same time. Binary logistic regression shows: advanced age, left heart insufficiency, high dose of contrast agent before operation are the independent risk facts of CIN.

Conclusions: Short-term application of l-carnitine has the trend of lowering contrast-induced nephropathy in CHD patients with DM. The results show that urinary KIM-1 levels can be used as an indicator for early diagnosis of CIN.