rates. CIN was de-
standard intravenous isotonic saline hydration (control group; n
received intravenous

CONCLUSIONS

METHODS

RESULTS

RESULTS Baseline characteristics were well-matched between the 2
groups. CN developed in 21 patients (23.3%), and there was no sig-
nificant difference between the ioxaglate and iodipamide groups (17.8% vs.
28.9%; P=0.213). Extravascular lung water index (ELWI), global
diastolic index (GEDI) and central venous pressure (CVP) were all significantly increased after application of CM in the iopromide group
(13.1±3.8 ml/kg vs. 8.4±3.2 ml/kg in ELWI; 133±1.7 ml/m²
vs. 96±3.2 ml/m² in GEDI; 14.5±5 mmHg vs. 11.5±5 mmHg in CVP; all
P<0.001), and the changes of these preload indexes in the iopromide
group were significantly greater than in the ioxaglate group (all
P<0.05). The incidence of adverse events in terms of death, myocardial
infarction, repeat revascularization did not differ between the two
groups. The incidence of CIN and at the same time to avoid the acute heart
failure for these patients. Iopromide could signi-

GW26-e0392

Central Venous Pressure Guided Hydration Reduces Contrast Induced
Nephropathy in Patients Undergoing Coronary Procedures with Chronic
Kidney Disease and Congestive Heart Failure

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OBJECTIVES

Patients at moderate or high risk for contrast induced
nephropathy (CIN) should receive sufficient hydration before contrast
application to prevent CIN. The guidelines recommend controlling
rate of fluid administration in patients with heart failure, but inade-
quately hydration markedly increases the incidence of CIN. We expect
to explore an individual hydration method for patients with congest-
ive heart failure (CHF) and chronic kidney disease (CKD) to decrease
the incidence of CIN and at the same time to avoid the acute heart
failure for these patients.

METHODS This prospective, randomized, double-blind, comparative
clinical trial enrolled 264 consecutive patients with CHF and CKD
undergoing coronary procedures. These patients randomly received
either central venous pressure (CVP) guided hydration (n=132) or
standard intravenous isotonic saline hydration (control group; n=132).
In the CVP guided group, hydration infusion rate was automatically
adjusted according to CVP level every hour, and both study groups
received saline fluids for the hydration but at different rates. CIN
was defined as an absolute increase in serum creatinine
(SCr) >0.5 mg/dl (44.2 μmol/L) or a relative increase >25%
baseline SCr. Adverse events were assessed by 3 months follow-up
and all such events were classified by staff who were masked to
treatment assignment. This trial is registered with ClinicalTrials.gov,
number NCT02405377.

RESULTS Baseline characteristics were well-matched between the
two groups. Mean baseline Scr and the predictive CIN risk score were
comparable in the two groups. The total mean volume of isotonic
saline administered in the CVP guided hydration group is significantly
higher than the control group (1027±149 vs. 1202±247; P<0.001). CIN
occurred less frequently in CVP guided hydration group than in the
control group (15.9% vs. 29.5%; P=0.006). The incidences of acute
heart failure (acute pulmonary edema) during the perioperative
period, not significantly different between the two groups (6.8% vs.
7.6%; P=0.500). A lower incidence of cumulative 90-day adverse events
(replacement therapy, acute myocardial infarction, acute heart failure
decompensation) was also observed in CVP guided hydration patients
than in controls (8.3% vs. 20.5%; P=0.004).

CONCLUSIONS CVP guided fluid administration can safely and
effectively reduce the risk of CIN for patients with CKD and CHF.

GW26-e0451

Circulating Long Non-coding RNA, NONHSAT12178, with a Novel
Biomarker for Diagnosis of Coronary Artery Disease

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OBJECTIVES To investigate the long noncoding RNA (IncRNA)
NONHSAT12178 as a biomarker for coronary artery disease (CAD)
in peripheral blood monocyte cells (PBMC).

METHODS RT-qPCR was performed to validate the microarray results,
ROC curve was applied to study the potential of NONHSAT12178 as a
biomarker. Diagnostic models from NONHSAT12178 alone or combi-
nation of risk factors were established by using logistic regression. The
function of NONHSAT12178 was confirmed in THP-1 cell line by siRNA.

RESULTS The result indicated the expression of NONHSAT12178 in
PBMCs from CAD patients increased more than twice times by
microarray analysis and RT-qPCR compared with the control group,
P<0.05. Further validated independently in a population (n=20),
NONHSAT12178 expression (about 2.2-fold increase) was consistent with
the result from IncRNA microarray. The predictive value of NONHSAT12178 was assessed in a larger population of 211
CAD patients and 171 controls. Using a diagnostic model by Fisher
criteria, considered the risk factors, the corresponding sensitivity was increased from 70.00% to 82.00%, the specificity was
slightly decreased from 94.00% to 78.00%, respectively. AUC was
increased from 0.727 to 0.785 (P<0.001), from 0.712 to 0.768
(P=0.010), and from 0.769 to 0.835 (P<0.001), in original, training and
test samples respectively. Moreover, in a physical study, the
sensitivity of NONHSAT12178 was increased from 68.00% to 76.00%
and specificity was decreased from 90.00% to 82.50%, respectively.
NONHSAT12178 was also found to be specific in CAD compared with
other cardiovascular diseases. Finally, we found neighboring protein-
coding gene peroxisome proliferator-activated receptor delta
(PPARD) and its target genes adipose differentiation-related protein
(ADRP) and angiopoietin-like 4 (ANGPTL4) are all transrepressed by
NONHSAT12178.

CONCLUSIONS Our present study indicated that NONHSAT12178 with
function, neighboring protein-coding gene PPARD, combination of
risk factors can be used as a biomarker for CAD.

GW26-e1018

Left Ventricular End-Diastolic Pressure and Brain Natriuretic Peptide
Guided Low-Dose Furosemide for Preventing Contrast-induced
Nephropathy in the Percutaneous Coronary Intervention

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OBJECTIVES This study was to evaluate on the prophylactic effect of
low-dose furosemide guided by left ventricular end-diastolic pressure
and brain natriuretic peptide on contrast-induced nephropathy
of patients with percutaneous coronary intervention on basis of
adequate hydration.

METHODS The patients of PCI(Percutaneous Coronary Intervention)
were recruited. The inclusion criteria: 1.male or female, 18-75 years
old; 2.sign the informed consent. Exclusion criteria: 1.inability to
obtain consent from participants; 2.primary percutaneous coronary
intervention for ST-segment elevation myocardial infarction; 3.renal
replacement therapy; 4.exposure to radiographic contrast media
during the previous 2 days; 5.allergy to radiographic contrast media;
6.acute decompensated heart failure; 7.severe valvular heart disease;
8.mechanical aortic prosthesis; 9.left ventricular thrombus; 10.history
of coronary intervention for ST-segment elevation myocardial infarction; 11.malignant tumors; 12.thrombocytopenia; 13.bleeding
diathesis; 14.history of bleeding diathesis; 15mmHg or BNP
>25% compared with the control group was administered 20 mg furosemide right after the
procedure, but the experimental group was treated independently, ac-

result indicated the clearance rate and glomerular filtration
rate could be calculated, also the all-cause mortality,
myocardial infarction, renal replacement therapy and composite incidence of cardiac adverse events were followed up at the time of 1 and 6 months.

RESULTS The designed number were 1140 patients, now it was the results of 188 patients (the control group was 87) and experimental group was 101. The basic clinical characteristics and complicated disease were not significantly different (P > 0.05). The creatinine, creatinine clearance rate and glomerular filtration rate were not significantly different in control group before and after the operation (P = 0.823, P = 0.87 and P > 0.93). The same results were gained in experimental group (P = 0.153, P = 0.16 and P = 0.21). There were no difference of changing degree of creatinine, creatinine clearance rate and glomerular filtration rate before and after the PCI between the control and experimental group (P = 0.398, P = 0.065 and P = 0.956). The incidence of CIN in control group was 8.05%, and the incidence of CIN in experimental group was only 2.97%, but there was no difference also (P > 0.12).

CONCLUSIONS The primary results shows that the left ventricular end-diastolic pressure and brain natriuretic peptide guided low-dose furosemide may be beneficial for preventing contrast-induced nephropathy in the percutaneous coronary intervention, but the conclusion need further observations to prove. International Clinical Trials Register main ID: ChiCTR-IROR-14005250.

GW26-e3270 Relationship between clopidogrel metabolism polymorphism and variable platelet reactivity in 1 year: a cohort study
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OBJECTIVES To investigate the effect of clopidogrel polymorphism on platelet reactivity and clinical outcome.

METHODS 236 PCI-treated patients were recruited and followed up for one year in a cardiovascular monocenter. All blood samples of patients were collected, and desoxyribonucleic acid (DNA) were genotyped. Platelet reactivity unit (PRU) was measured by VerifyNow technique as well. CYP2C19, ABCB1, ITGB3, PON1 and P2RY12 allele were assessed.

RESULTS 236 patients were genotyped and finished one year follow up. Clinical endpoints were related to previous heart disease history (P = 0.0172), stroke (P = 0.0483) and diabetes (P = 0.0474). High treatment on platelet reactivity (HTPR) were frequent in old age technique as well. CYP2C19, ABCB1, ITGB3, PON1 and P2RY12 allele to investigate the effect of clopidogrel polymorphism.

RESULTS 1 The proportion of multi-vessel disease was significantly higher in progressive group than those in nonprogressive group (P < 0.05).
2 Compared with nonprogressive group, the mean level of Lp-PLA2 activity of progressive group before and after PCI 24 hours were significantly higher, and the level of Lp-PLA2 activity after PCI was higher than before in all patients (12.37 ± 6.27 nmol/min/ml vs 8.92 ± 3.16 nmol/min/ml, (21.43 ± 5.28 nmol/min/ml vs 14.86 ± 4.18 nmol/min/ml, P < 0.05).

CONCLUSIONS Lp-PLA2 activity and multi-vessel disease may predict the progression of nonculprit lesions after PCI.

GW26-e4636 Impacts of Anticoagulation with Bivalirudin versus Low Molecular Weight Heparin on Thrombocytopenia during IABP Therapy
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OBJECTIVE Comparing the impacts of low molecular weight heparin and bivalirudin on blood platelet counts as well as the level of antibody of platelet factor 4 heparin-dependent antibodies (H-PPF IgG) during IABP therapy.

METHODS This pilot study was designed to totally enroll 60 patients of AMI complicated cardiac shock who underwent PCI and IABP procedure (during or after PCI). Enoxaparin or bivalirudin were respectively used as anticoagulation drugs in the heparin group and the bivalirudin group during IABP therapy after PCI. Intravenous blood cells, platelet, red blood cells and white blood cells were collected at different time, including before IABP procedure, at 2 hours, every 24 hours after IABP implantation and until 72 hours after IABP withdrawn, to determine platelet related indices, red blood cell related indices, hemolysis related indices and antibody of H-PPF IgG. Bone marrow smear to discover the proliferation status if patients signed informed consent to undergo bone marrow puncture after IABP withdrawn.

RESULTS The average IABP courses were not significantly different between the heparin group and the bivalirudin group [(4.45 ± 1.50) day versus (4.40 ± 1.47) day, P = 0.891]. Thrombocytopenia was developed in 13 patients in the research, and the incidence of thrombocytopenia was 25%. The general tendency of platelet changes in the two groups showed that the count went down rapidly after implantation of IABP and then went slightly up slowly until the withdrawn of IABP. Once withdrawing IABP, platelet count rose rapidly and even surpassed the baseline level. The decrease of platelet number was remarkably smaller in bivalirudin group than in heparin group (P < 0.043), but there were no significant differences between the two groups when comparing at the same time points (P > 0.05). The number of red blood cells, hemoglobin quantitative and hemocrit of amplitude of changes were greater in the heparin group than in bivalirudin group (P < 0.05), and the basic level of total bilirubin and unconjugated bilirubin were much higher in the heparin group than in the bivalirudin group (P < 0.05). Before implantation of IABP, there was no significant difference between the two groups in the level of antibody to H-PPF IgG (P > 0.05). However, the level of antibody to H-PPF IgG was much higher in the heparin group than in bivalirudin group (P = 0.043), and the increase amplitude of antibody to H-PPF IgG was greater in the heparin group than in the bivalirudin group (P = 0.048).

CONCLUSIONS 1. Platelets number went down rapidly after implantation of IABP and got to the lowest level at the 3rd day, then regained slowly and got back or even surpassed to the baseline after the withdrawn of IABP. 2. Mechanical rupture of platelets was the major mechanism of thrombocytopenia during IABP therapy when heparin-induced-thrombocytopenia also played an very important role in it. 3. Compared with low molecular weight heparin, bivalirudin showed a potential to reduce the incidence of thrombocytopenia while used as a anticoagulation during IABP therapy.

GW26-e5364 Impact of different time periods on symptom onset- first medical contact and door-to-balloo time in patients with acute ST-segment elevation myocardial infarction
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OBJECTIVES The law of onset time was very important to prognostic of patients with acute myocardial infarction. This study investigated