IABP treatment in acute myocardial infarction (AMI) with or without cardiac shock from all published randomized trials (RCTs) to date.

METHODS To identify all RCTs of IABP therapy, public databases including MEDLINE (1966 to 2014) and EMBASE (1980 to 2014) were searched. The search was restricted to human studies and clinical trials or randomized controlled trials only. In addition, we also manually searched bibliographies of identified studies if needed. References were screened for studies that compared the use of IABP in AMI with or without cardiac shock. Data extraction was carried out independently and in duplicates.

RESULTS Seventeen relevant studies met the inclusion criteria and 3226 participants were enrolled in our study after in-depth review. We analyzed the impact of IABP management on short-term mortality in 14 trials (2934 patients), long-term mortality in 9 trials (1743 patients). There was no significant difference on short-term mortality (less than 30-day mortality) between IABP and AMI patients with cardiogenic shock and control group (RR, 0.91; 95% CI, 0.77–1.08; P = 0.293). Similar result was also observed in AMI patients without cardiogenic shock (RR, 0.88; 95% CI, 0.60–1.29; P = 0.279). Taken together, the short-term mortality of patients with AMI with and without cardiogenic shock does not differ between IABP and control group (RR, 0.90; 95% CI, 0.77–1.06; P = 0.214). Interestingly, further analysis of two subgroups in 9 studies (4410 subjects with cardiac shock and 5 without cardiac shock) also demonstrated that IABP therapy was not associated with a significantly reduced risk of long-term mortality (6- and 12-month mortality rate) (RR, 0.91; 95% CI, 0.79–1.04; P = 0.152). Similar results were shown when the analyses were performed on patients with (RR, 0.95; 95% CI, 0.78–1.10; P = 0.400) or without cardiogenic shock (RR, 0.73; 95% CI, 0.49–1.09; P = 0.122), respectively.

CONCLUSIONS As far as we know, this is the first updated meta-analysis of only randomized controlled trials including IABP-SHOCK II trial. We did not observe substantial benefit from IABP use in AMI patients with or without cardiac shock in reducing the short-term and long-term mortality rate. However, AMI is not only associated with compromised cardiac contractile function, especially in patients with cardiogenic shock. Other than mortality, more comprehensive assessment of hemodynamic changes or laboratory inflammatory markers may serve as better end points. Therefore, future RCTs with larger numbers of patients and rigorous design are required.

**GW26-e0731**

Relationship Between Myocardial Perfusion and Vascular Endothelial Function in Patients with Non-ST-Segment Elevation Acute Coronary Syndrome

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OBJECTIVES Endothelial function plays a key role in determining the clinical manifestations of atherosclerotic lesions. This study aimed to investigate the relationship between endothelial function and myocardial perfusion before or after percutaneous coronary intervention (PCI) in patients with non-ST-elevation acute coronary syndrome (NSTEMI-ACS).

METHODS 172 patients, with high-risk NSTEMI-ACS were measured levels nitric oxide (NO) and endothelin (ET), and detected the brachial artery flow-mediated vasodilation (FMD) before PCI. The angiographic data was analyzed before and after PCI, in terms of TIMI myocardial perfusion grade in the area of culprit vessels.

RESULTS Before PCI, 78 patients with TMPG 1–2 had lower NO levels (44.16±0.16μM/L vs. 52.25±0.15μM/L, P = 0.042), and lower FMD (2.66±1.83% vs. 3.45±1.43%, P = 0.028) than those with TMPG 3–5. After PCI, NO levels were not different (P = 0.462 μM/L vs. 0.471 μM/L) PCI. 47 patients with TMPG 1–2 had lower NO levels (42.64±0.14μM/L vs. 54.87±0.1μM/L, P = 0.031), and lower FMD (2.03±1.25% vs. 3.66±1.38%, P = 0.020) than those with TMPG 3–5.

CONCLUSIONS Lower NO levels and lower FMD can be measured before PCI in those high-risk NSTEMI-ACS patients with poor myocardial perfusion pre- or post-PCI, which indicated more damaged endothelial function in poor myocardial perfusion patients with NSTEMI-ACS.

**GW26-e0741**

Fractional Flow Reserve Guided Percutaneous Coronary Intervention improves clinical outcome with reduced cost in Chinese real world practice

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OBJECTIVES Fractional flow reserve (FFR) is currently considered the gold standard for evaluating the functional significance of coronary stenosis. However, its potential benefits in real-world practice remain unclear in China.

METHODS A retrospective cohort study was carried out using the EMRS database of The Second Affiliated Hospital of Zhejiang University, a tertiary and high-volume center in China. Clinical events were compared using the Cox proportional hazards model during a median follow-up of 13 months.

RESULTS The study cohort consisted of 366 consecutive patients who were selected for coronary revascularization with adjunct FFR and 366 matched controls, from 2010 to 2014. Major adverse cardiac events (death, myocardial infarction, repeated revascularization, or hospitalization for angina) at 4 years were found in 12.0% of angiography-guided patients and 4.9% in the FFR-guided group (P = 0.001). The myocardial infarction rate was significantly lower in FFR treated subjects (0.52% vs. 0.82% stents) compared with the angiography-guided group (0.93% vs. 0.96 stents) (P < 0.001). No difference in overall costs at initial hospitalization was observed between angiography-guided percutaneous coronary intervention (PCI) compared with FFR-guided PCI (¥30000, range 7393–44700 versus ¥21200 (¥19000–47100) (P = 0.54). How ever, mean costs for major adverse cardiac events during follow-up were significantly reduced in the FFR-guided arm (¥1688 ± 9554 versus ¥3441±12873, P < 0.001).

CONCLUSIONS In the contemporary clinical practice, FFR-guided PCI is associated with decreased costs of stents, improved clinical outcome, and reduced costs, compared with angiography-guided PCI.

**GW26-e4423**

Analysis of the risk factors and characteristics of coronary artery disease of Han, Uygur and Kazak patients with acute myocardial infarction in Xinjiang Jiao Wang Muhuyi

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OBJECTIVES To discuss the risk factors and characteristics of coronary artery disease of Han, Uygur and Kazak patients with acute myocardial infarction in Xinjiang.

METHODS A retrospective analysis of clinical data of 262 cases of Han patients, 166 cases of Uygur patients and 86 cases of Kazak patients was conducted, whose age, body mass index, cholesterol, uric acid, hypertension, type 2 diabetes, smoking, drinking, family history of coronary heart disease, relationship between PCI history and pathogenesis of acute myocardial infarction, and coronary artery disease characteristics were observed and compared in different groups.

RESULTS Between the Han and minority young patients, there were statistically significant differences in the distribution of BMI, lipoprotein a, positive family history of coronary heart disease, uric acid level, the combined aspects of smoking history (P < 0.017); there were also statistically significant differences in BMI, TC, HDL-C, LDL-C, apolipoprotein AI, positive family history of coronary heart disease between Han and Uygur patients (P < 0.017). There were statistically significant differences in the distribution of BMI, TC, HDL-C, LDL-C, apolipoprotein A1, positive family history of coronary heart disease between minority young patients and older patients (P < 0.017). Han and Kazak patients had statistically significant differences in the distribution of BMI, TC, HDL-C, LDL-C, apolipoprotein A, lipoprotein a, type 2 diabetes and hypertension (P < 0.017). Comparison of patients in Xinjiang and Kazak showed that there were statistically significant differences in the distribution of BMI, TC, HDL-C, LDL-C, apolipoprotein AI, apolipoprotein B and type 2 diabetes between the two groups (P < 0.017). The proportion of zero lesions and single- vessel lesions in Han, minority youth patients was higher than that of elderly patients (P < 0.001), and the proportion of two and three lesions was less than that of elderly patients (P < 0.001). Gensini score of Han patients was greater than that of Uygur patients (P < 0.01) and the Kazak patients (P = 0.005). The proportion of Han patients with single-vessel disease was less than that of Kazak patients (P = 0.003), and the proportion of patients with double-vessel disease was greater than that of Kazak patients (P = 0.007). The logistic show that: the risk factors of minority youth are TG (OR = 30.793), smoking (OR = 6.203), hypertension (OR = 4.49), hyperuricemia (OR = 2.912) (P < 0.05).

CONCLUSIONS There were ethnic differences in risk factors and the characteristics of coronary artery disease of AMI patients in Xinjiang.
GW26-e4737
Prognosis of Diabetic patients with non ST-elevation Myocardial Infarction
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OBJECTIVES Diabetics with acute myocardial infarction (AMI) have a higher risk of adverse outcomes because of complicated factors. Our aim was to investigate the impact of diabetes on the long-term prognosis in patients with non ST-elevation myocardial infarction (NSTEMI) patients in the current era.

METHODS From 2002 to 2013, a total of 2080 patients diagnosed of NSTEMI were retrospectively evaluated in the Cardiology Department of the First Affiliated Hospital of Dalian Medical University. Unified follow-up questionnaire was used to visit the NSTEMI patients by telephone contact (cut-off date was October, 2014). We compared hospital care data and prognosis between diabetic and non-diabetic patients.

RESULTS Diabetic patients accounted for 38.6% (n=803). Compared with nondiabetic patients, Diabetics were more likely to be older (71.0 vs. 67.0; P <0.001), female (47.6% vs. 29.8%; P <0.001), and to have hypertension (80.4% vs.60.3%, P <0.001), prior cerebrovascular disease (6.2% vs. 3.3%, P =0.002) and renal insufficiency (36.5% vs. 24.9%, P <0.001) and killip 3(16.1% vs. 8.1, P <0.001).

The median follow-up time was 3.1 years. Diabetic patients showed higher mortality (32.4% vs.20.9%; P <0.475) and secondary endpoint rates (27.2% vs. 24.6%; P <0.01); 2. The levels of HMGB1 in the intervention group were statistically significant compared with the control group 24 hours later.

CONCLUSIONS The diabetic patients with NSTEMI had worse prognosis. However, PCI therapy narrowed the gap of the prognosis between diabetic and nondiabetic patients.

GW26-e1312
Changes of Expression of HMGB1 Interferenced with atorvastatin in acute ST-segment elevation myocardial infarction patients with 2-type Diabetes
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OBJECTIVES To observe atorvastatin mediated inflammatory factor HMGB1 in patient of acute ST-segment elevation myocardial infarction with 2-type Diabetes.

METHODS 226 patients with consecutive elections ST-segment elevation acute myocardial infarction with 2-type Diabetes were collected from January 2008 to December 2014, aged 27-90 years old, ruled out infectious diseases, cancer, collagen diseases, application of immunosuppressive drugs. All patients underwent emergency coronary intervention, were randomly divided into control group and early intervention atorvastatin group (undergoing emergency percutaneous coronary intervention 30 minutes to 1 hour after oral administration of atorvastatin 80mg), ELISA was used to measure the contents of HMGB1.

RESULTS 1. The levels of HMGB1 in two groups increased 24 hours after PCI (P <0.01); 2. The levels of HMGB1 in the intervention group was statistically significant compared with the control group 24 hours later.

CONCLUSIONS High-dose atorvastatin used i in patient of acute ST-segment elevation myocardial infarction with 2-type Diabetes before percutaneous coronary intervention promotes HMGB1 levels drop, reduce inflammatory response in patients.

GW26-e0198
The analysis of clinical characteristics of Debakey I aortic dissection Injury the left main coronary artery
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OBJECTIVES Analysis the characteristics of Debakey I aortic dissection injury the left main coronary artery.

METHODS Collected the clinical data of patients in our hospital in recent 5 years, diagnosed as Debakey I aortic dissection injured the left main coronary artery. All patients through the aortic CTA diagnosed.

RESULTS Debakey I aortic dissection injured the left main coronary artery shows a typical ECG expression of the Coronary heart disease with Left main coronary lesions. Confused easily with acute non ST segment elevation myocardial infarction but the age of onset of chest pain is younger, more serious, often accompanied by backache, careful physical examination can also find hints of aortic dissection information, besides, troponin levels, previous chest pain history and ECG dynamic changes have certain difference.

CONCLUSIONS Debakey I aortic dissection is a critical cardiovascular diseases. Often injured the right coronary artery, caused acute inferior myocardial infarction. Left main coronary artery injured is rare but very dangerous. And easily misdiagnosed as acute coronary syndrome treated with serious consequences, ECG expression of the Coronary heart disease with Left main coronary lesions Should exclude aortic dissection Firstly.

GW26-e1510
Approach of Determining Culprit Vessel in acute inferior myocardial infarction by ECG
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OBJECTIVES According to the indexes of electrocardiogram in the patient who with acute inferior wall myocardial infarction, analyze the judging process to identifying the Culprit Vessel.

METHODS 193 patient who with acute inferior myocardial infarction were admitted into the study, According to the results of CAG divided into RCA occlusion group and LCX occlusion group, Analysis the Indexes of ECG, summarize the diagnosis process of IRA.

RESULTS 1. The approach to determine RCA or LCX of culprit vessels: step 1: ST1 >0.05mv in lead V4R or III AVB is a sign to identify RCA; step 2: ST1 >0.05mv in lead I and AVL is a sign to identify RCA; ST and excursion of terminal line in lead I and AVL is a sign to identify LCX. Step 3: ST1 in lead II/ST1 in lead III >1 is a sign to identify LCX. Step 4: ST1 in lead V1, V2 and V3/ST1 in lead II, III and AVF <1 is a sign to identify RCA; ST1 in lead V1, V2 and V3/ST1 in lead II, III and AVF >1 is a sign to identify LCX.

CONCLUSIONS ECG analysis can determine the part of culprit vessel in a rapid and accurate way.

GW26-e1578
The glycated hemoglobin Alc (HbA1c) levels and the prognosis after PCI in postmenopausal women with acute coronary syndrome and diabetes
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OBJECTIVES To explore the influence of glycated hemoglobin Alc (HbA1c) levels on clinical outcomes in postmenopausal women with acute coronary syndrome and diabetes after percutaneous coronary intervention (PCI).

METHODS We selected 675 consecutive first hospitalized patients with acute coronary syndrome (ACS) during January 2008 to January 2013 in the hospital. All the patients were postmenopausal women (>55 years old) and preformed PCI treatment. According to HbA1c levels and diagnosis of diabetes, patients were divided into 3 groups: normal diabetics (A group, N=373), good-control diabetics(B group, HbA1c<7.0%, N=75), poor-control diabetics (C group, HbA1c>7.0%, N=154). Patients information was collected,12 hours of fasting peripheral venous blood was taken to detect glycated hemoglobin, fasting blood glucose, blood lipids, etc. According to the image of coronary artery angiography, the SYNTAX score was calculated, after PCI the number and length of implanted stent was recorded. All