to be responsible for myocardial ischemia in patients with cardiac syndrome X (CSX). It has never been directly demonstrated, and the correlation between CMR and severity of myocardial ischemia has not been elucidated in this setting. This study aimed to ascertain the increased CMR directly and to explore the relationship between CMR and severity of ischemia in patients with CSX.

**METHODS**
We studied 18 patients with CSX and 18 age- and sex-matched control subjects. Thermal modulation derived coronary flow reserve and index of microvascular resistance were measured using a pressure-temperature sensor-tipped coronary wire. Exercise treadmill test was performed by the Bruce protocol for calculating Duke treadmill score.

**RESULTS**
Coronary flow reserve was significantly lower (2.7±0.81 versus 3.6±0.72; P<0.001) and index of microvascular resistance was higher (33.1±7.9 versus 18.8±5.6 U; P<0.001) in patients with CSX compared with those in control subjects. The Duke treadmill score was correlated positively to coronary flow reserve (r=0.339; P=0.021) and negatively to index of microvascular resistance (r=-0.742; P<0.001) in patients with CSX.

**CONCLUSIONS**
Using an intracoronary thermodilution method, we for the first time directly demonstrated an increased microvascular resistance in patients with CSX. Furthermore, severity of ischemia was found to be intimately associated with CMR in this setting.

**GW26-e2972**
Local Intracoronary Epitifibatide versus Mechanical Aspiration in Patients with Acute ST-Elevation Myocardial Infarction
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**OBJECTIVES**
We compared local delivery of intracoronary epitifibatide via perfusion catheter to thrombus aspiration in primary PCI.

**METHODS**
75 patients with acute STEMI were randomized to three groups: 25 received local intracoronary epitifibatide and verapamil via perfusion catheter; 25 patients were managed by Diver CE thrombectomy and 25 patients by primary PCI without thrombus aspiration. Primary end point was assessment of postprocedural TIMI flow, MPG, and corrected TIMI frame count (cTFC) in the culprit vessel.

**RESULTS**
Perfusion catheter was superior to thrombus aspiration and conventional PCI as regards MBG (68% versus 36% in Diver CE and 20% in the control arm; P value = 0.002), with shorter cTFC rates than thrombectomy and control groups (20.76±4.44 versus 26.68±9.40 and 28.16±5.96 resp.). TIMI flow was not different between the 3 groups. Local intracoronary epitifibatide by perfusion catheter led to less time to peak CK (13.12 hours versus 16.5 and 19.5 hours, respectively, P value = 0.001).

**CONCLUSIONS**
Local intracoronary epitifibatide by perfusion catheter reduces thrombus burden with better results in microvascular perfusion assessed by cTFC and MBG compared to aspiration device or conventional PCI.

**GW26-e3587**
Percutaneous coronary intervention in the circumflex artery of the left main coronary artery originating from the right sinus of Valsalva
Tianqi Li, Xinxing Guo Taihongong Hospital affiliated to Fudan University

**OBJECTIVES**
It is very rare that the left main coronary artery (LMCA) arises from the right sinus of Valsalva. Percutaneous coronary intervention (PCI) on an anomalous coronary artery remains a challenge for interventional cardiologists. In this case we successfully implanted a stent into the left circumflex artery on a patient with this kind of anomaly who suffered from acute coronary syndrome (ACS).

**METHODS**
A 49-year-old man was admitted with diagnosis of ACS, non-ST-segment elevation myocardial infarction (NSTEMI). Coronary angiography was performed about 20 hours later with right radial approach. Angiographic results showed that the anomalous LMCA arose from an independent ostium in the right sinus of Valsalva. Angiography of the left circumflex artery (LCX) showed a 99% stenosis in the proximal portion. The left anterior descending artery (LAD) was very small and did not have serious stenosis. The right coronary artery (RCA) was found an about 70% stenosis in the ostium of the posterior descending artery (PDA). PCI on the LCX was performed by using a 6F Judkins right-guiding catheter (Cardis Corporation, USA). A 0.014” high torque floppy guidewire successfully went across the lesion. A 2.75-23mm Everolimus eluting stent (Xience V stent, ABOTT, USA) was implanted after pre-dilation with a 2.5-20mm balloon (Ryuin Plus balloon, TERUMO, Japan). After stent implantation, we found diffused lesions from the middle to distal portion of the LCX. However, we failed to pass balloons through the tortuous mid-LCX. The PCI procedure had to be finished after attempt for about 30 minutes.

**RESULTS**
The patient was discharged on cilostazol 50mg twice daily, clopidogrel 75mg once daily, metoprolol 12.5mg twice daily, perindopril 4mg once daily and rosuvastatin 10mg daily after stent implantation in good health status without any cardiac adverse event. One month later, multi-slice computed tomography (MSCT) confirmed the angiographic findings and demonstrated that the anomalous LMCA coursed through myocardium of the interventricular septum.

**CONCLUSIONS**
There were few case reports described PCI in patients with coronary artery anomalies. In our case, it was very difficult to estimate the course of the anomalous culprit artery. How to select appropriate catheters to perform intervention had also remained a challenge. We chose a Judkins right-guiding catheter to perform PCI because the ostium of the LMCA was very close to that of the RCA in the right sinus of Valsalva. However, this guiding catheter may be not most suitable because the initial segment of the anomalous LMCA coursed in the similar direction of the RCA and then turned to the opposite direction which was demonstrate by the 64-slice CT examination. A left-guiding catheter, such as a TERUMO BL or an Amplatz short-tip catheter might be a better choice in this rare situation.

**GW26-e3988**
The efficacy and safety of balloon dilation in treating radial artery spasm
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**OBJECTIVES**
To analyze the efficacy and safety of balloon dilation in treating radial artery spasm.

**METHODS**
Continuously choose 18 patients who accepted coronary angiography via radial artery access successfully. But after angiography the radial artery spasm happened and guiding catheter could not pass the spasm position. The PTCA guide wire was delivered through guiding catheter into radial artery, then a 2.0-20mm balloon was sent to the spasm position and dilated in 8 atm for 20 seconds. Then balloon and guide wire were moved away, and the guiding catheter could pass through the spasm position successfully. After operation the patients were close observed to find whether the radial artery was injured.

**RESULTS**
Guiding catheter could pass through the spasm position successfully in all the 18 patients after balloon dilation. And no radial artery injury observed.

**CONCLUSIONS**
Balloon dilation was effective and safe in treating stubborn radial spasm.

**GW26-e4424**
Evaluation Intravascular ultrasound on the prognosis of patients with unstable angina pectoris
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**OBJECTIVES**
Study on critical lesions with intravascular ultrasound (IVUS), to evaluate the value of IVUS to assess the prognosis of patients with unstable angina pectoris.

**METHODS**
104 cases in 2011 January to 2012 December in cardiovascular department of internal medicine Tangshan City workers hospital underwent coronary angiography (CAG) examination to determine the critical disease patients, 48 cases were examined with IVUS after interventional therapy, in group A, 56 cases without IVUS examination, in group B. The lesion is vascular external elastic membrane area, minimum lumen area, plaque burden were measured using intravascular ultrasound. 2 year follow-up of patients, divided after 1, 6, 12 and 24 months of follow-up, the evaluation of angina attack, nonfatal acute myocardial infarction and readmission, compare the differences between the two groups of patients.