

complicated with coronary heart disease (CHD) should be strictly maintained the patient's blood sugar at the ideal level, and pay attention to it in the actual work has important significance to delay the development of coronary artery lesions and reduce coronary heart disease condition.

GW27-e1031

In-Stent Anchoring Facilitates Balloon Delivery for Final Kissing: A Prospective, Single-Centre Registry Study

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OBJECTIVES Re-crossing the compromised side branch (SB) with a balloon is sometimes technically challenging. Our aim was to evaluate whether in-stent anchoring (ISA) is safe and effective to facilitate SB balloon delivery for final kissing.

METHODS We included 159 consecutive patients (a total of 166 bifurcation lesions) in this prospective, single-centre registry. ISA was used as a bailout method after unsuccessful SB crossing using conventional techniques, including low-profile balloons. Technique success was defined as SB balloon delivery and final kissing. Kissing balloon (KB) delivery was successfully performed with conventional strategies in 149 of 166 lesions (89.8%). In the remaining 17 lesions (10.2%), re-crossing of the main vessel stent strut was not successful; therefore, ISA was attempted. The balloon successfully crossed the stent struts and final kissing was achieved in 15 of 17 lesions (88.2%). Total final kissing was achieved in 164 of 166 lesions (98.8%), with success rates of 100% in the single-stent group and 97.6% in the two-stent group.

RESULTS Two cases without balloon delivery involved complex bifurcation lesions with severe calcification. There was no vessel dissection in the anchoring zone.

CONCLUSIONS ISA is a safe and effective balloon delivery strategy when conventional low-profile balloons fail.

GW27-e1034

Clinical Observation of Rotational Atherectomy in Heavily Calcified Coronary Lesions via the transradial approach

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OBJECTIVES To investigate the safety and efficacy of rotational atherectomy (RA) in the treatment of heavily calcified coronary lesions via the transradial approach.

METHODS This retrospective study sought to compare patients undergoing RA via the transradial (TR) and transfemoral (TF) route in 72 consecutive patients with severely calcified lesions (37 radial, 35 femoral) in our hospital from September 2012 to September 2015. The primary outcomes included acute myocardial infarction (AMI), revascularization and death.

RESULTS Procedural success rates were 100% in both TR and TF groups without complications. There was a significantly less major access site bleeding complications in favor of radial artery access (8.1% vs 28.6%, $P=0.009$). RA procedural complications rates were similar in two groups (17.1% vs 24.3%, $P=0.675$), the duration in bed and mean hospital stay of the TR group was both shorter than that of TF group (9.1±18.0 vs 38.4±25.8 hours, $P<0.001$; 5.3 ± 1.7 vs 7.7 ± 3.1 days, $P<0.001$), both the incidence of in-hospital and one year follow-up major adverse cardiac events (MACE) were low in TR and TF group (13.5% vs 17.1%, $P=0.156$; 16.2% vs 11.4%, $P=0.516$).

CONCLUSIONS Radial access can be safely and successfully used as an alternative to femoral access for RA performance on the patients with heavily calcified coronary lesions needing RA by experienced operators.

GW27-e1036

Clinical outcomes of rotational atherectomy via the transradial approach for the treatment of heavily calcified unprotected left main disease

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OBJECTIVES To appreciate the efficacy and safety of rotational atherectomy via the transradial approach in the treatment of heavily calcified (ULMCA) unprotected left main lesions.

METHODS Thirty two patients with severely calcified ULMCA stenosis who were not eligible for (CABG)coronary artery bypass grafting were enrolled between January 2011 and July 2015. Procedural success rate and long-term major adverse cardiovascular events (MACE) including death, nonfatal myocardial infarction and target lesion revascularization (TLR) were evaluated.

RESULTS Thirty two patients (25 males; mean age, 69±7 years;) with ULM stenosis were treated with rotational atherectomy (RA). Of these, 61.9% and 71.4% patients had diabetes and hypertension. The mean Euro SCORE and SYNTAX score was 5.4 and 37.2, respectively. The mean number of treated vessels was 2.56±0.91, no-reflow was observed in 4 patients during the procedure.

intra-aortic balloon pump was used in three cases. All 22 patients went through the operation successfully. The major events registered after the procedure included myocardial infarction in 1 patient, and access site bleeding in 4 patients. After a median of 10.9 (IQR 6.8-23.4) months of follow-up, 1 cardiac death was recorded. Survival free of cardiac death was 89.7±11% and target vessel revascularization 5.7±9% in one year.

CONCLUSIONS Rotational atherectomy followed by stent implantation via transradial approach is feasible, effective and safe in patients with heavily calcified unprotected left main lesions.

GW27-e1107

The Clinical Character of PCI, CABG and medical therapy for patients with CAD

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OBJECTIVES To analyze the clinical character of CABG (coronary artery bypass graft surgery), PCI (percutaneous coronary intervention) and medical therapy for patients with CAD (coronary heart disease) in the real clinical practice.

METHODS This is a multicenter, retrospective trial to analyze of the Clinical Character of PCI, CABG and medical therapy for patients with CAD between January 2003 and December 2011. All patients were consecutively enrolled in this study. The clinical data in hospitalization were recorded, and clinical events were followed up.

RESULTS 1, 8,770 patients with CAD were enrolled and 1018 patients (10.4%) were excluded. 469 patients (5.34%) had stable angina pectoris, 6010 patients (68.5%) had unstable angina pectoris, 790 patients (9.0%) had non-ST segment elevation myocardial infarction, and 1,501 patients (17.1%) had ST segment elevation myocardial infarction.

2, The proportion of CAD patients managed by PCI is 55.0%(4842/8770). The proportion of patients in the years of 2003-2005, 2006-2008, 2009-2011 managed by PCI is 38.6%, 59.9% and 58.9%. In 2011, the proportion of CAD patients managed by PCI is 64.9%. The proportion of patients with SAP, UAP, NSTEMI and STEMI managed by PCI is 48%(225/469), 50.7%(3448/6800) and 77.9%(1169/1501) respectively. 56.7% of STEMI were treated by emergency PCI.

3, The proportion of patients with left main disease, triple vessel disease and diabetes managed by PCI was 43.5% (337/777), 65.0% (1732/2663) and 52.2% (1266/2427).

4, The rates of patients using Clopidogrel, Aspirin, Statin and ACEI/ARB were 44.7%, 74.7%, 78.6%, 36.2% and 21.0% respectively.

CONCLUSIONS 1, As only 5.34% patients were diagnosed as stable angina pectoris patients, there is possible over diagnosis as unstable angina pectoris.

2, PCI is the main way to treat CAD and there is an upward trend of applying this technique.

3, The proportion of patients with LMD, TVD and diabetes managed by PCI was higher than those managed by PCI and medication significantly. And there is a great gap between the guideline and the clinical practice.

4, The compliance of all patients with evidence-based medication should be improved.

GW27-e1109

The Prognosis of Multi-vessel Coronary Revascularization in Patients with or Without Diabetes Mellitus

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OBJECTIVES The purpose of this study was to evaluate the outcome of coronary artery bypass graft surgery (CABG) and percutaneous

coronary intervention (PCI) in patients who had multi-vessel coronary artery disease with or without diabetes mellitus.

METHODS This is a multicenter, retrospective trial to assess the outcome of the CABG and PCI in patients who had multi-vessel coronary artery disease with or without diabetes mellitus between January 2003 and December 2011.

The primary outcome is major adverse cardiac and cerebrovascular events (MACCE=all-cause mortality, myocardial infarction, stroke or re-revascularization).

RESULTS Patients with multi-vessel disease were divided in diabetic group (n=662, 29.9%) and non-diabetic group (n=1549, 70.1%). The rates of all-cause mortality of diabetic group and non-diabetic group were 6.0% (n=40), 4.3% (n=67), P=0.0911; The rates of MACCE were 13.3% (n=88), 9.06% (n=139) P=0.0027. The incidence of MACCE was significantly higher in diabetic patients than those of non-diabetic patients (OR 1.555, 95%CI 1.114-2.169, P=0.0094), the incidence of all-cause mortality in diabetic group was similar to that of non-diabetic group (OR 1.176, 95%CI 0.665-2.082, P=0.5769).

Among diabetic patients, the rates of all-cause mortality of PCI, CABG were 6.9% (n=35), 3.3% (n=5), P=0.0800; The rates of MACCE were 14.1% (n=72), 10.5% (n=16), P=0.22787. The incidence of all-cause mortality was significantly lower in CABG than in PCI (OR=0.069, 95% CI, 0.008-0.559 P=0.0123). The incidence of MACCE in CABG was similar to that of PCI (OR=1.641, 95% CI, 0.32-1.284 P=0.2093).

CONCLUSIONS Coronary revascularization with CABG surgery is the treatment of choice in diabetic patients with multi-vessel coronary artery disease.

Diabetes was the independent risk factor of MACCE in patients, who had multi-vessel coronary artery disease,

GW27-e1112

The Prognosis of Stable Angina Pectoris Patients with PCI, CABG and Medical Therapy

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OBJECTIVES The purpose of this study was to evaluate the outcome of percutaneous coronary intervention (PCI), coronary artery bypass graft surgery (CABG) and medical therapy in stable angina pectoris patients.

METHODS This is a multicenter, retrospective trial to assess the outcome of the PCI, CABG and medical therapy in patients who had stable angina pectoris between January 2003 and December 2011.

Among 8,770 CAD patients, 469 had stable angina pectoris and were managed by PCI (n=225), CABG (n=80) and medical therapy (n=164). The primary outcome measure is major adverse cardiac and cerebrovascular events (MACCE: all-cause mortality, myocardial infarction, stroke or re-revascularization).

RESULTS The rate of all-cause mortality of PCI, CABG and medical therapy were 2.67%, 5.00% and 1.22% respectively, P=0.2263; The rates of MACCE were 11.6%, 7.5% and 8.5% respectively, P=0.4559.

Multivariable logistic regression analysis showed that compared with medical therapy, the hazard rates of MACCE of PCI and CABG were 0.879 (PCI: OR=0.879, 95% CI 0.376-2.055, P=0.7898) and 0.596 (OR=0.596, 95% CI, 0.143-2.484 P=0.5186), respectively. However, there was no statistical significance of the hazard rates of MACCE.

CONCLUSIONS There was no difference in MACCE of stable angina pectoris patients by PCI, CABG and medical therapy.

GW27-e1244

First generation drug-eluting stent is not better than contemporary bare metal stent after long-term follow-up: A report from SCAAR

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OBJECTIVES Studies have shown that first generation drug-eluting stents (DES) substantially decrease risk of restenosis compared to contemporary bare-metal stents. However, long-term comparisons between DES and BMS are not well-studied. The aim of this study was to compare two stents that were previously frequently used in regard to long-term risk of restenosis and stent thrombosis.

METHODS We used data from the SCAAR registry (Swedish Coronary Angiography and Angioplasty Registry) for the PCI procedures performed in Värmland County in Sweden. The database contains

information about all procedures performed at five PCI centers (~20% of all SCAAR data). All consecutive procedures performed between 2004 and 2014 for stable angina, UA/NSTEMI and STEMI were included in the analysis. We compared two different stents: Cordis Cypher Select (C-CS), and Boston Scientific Liberté (BS-L). The two stents used during the study period are the result of biannual stent procurement procedures in our region. We modelled our data with multilevel Cox proportional-hazards regression with landmark analysis at one-year. The assumption of proportionality of hazards was fulfilled before and after one year of follow-up. We used stents as the primary observational unit with patients and hospitals as random effect variables. To adjust for differences in patient's characteristics the following variables were used: age, gender, hypertension, hyperlipidemia, smoking status, diabetes, severity of coronary artery disease, indication for PCI (stable angina, UA/NSTEMI and STEMI), stent length and stent diameter. The primary combined endpoint was time to first occurrence of either stent thrombosis or restenosis.

RESULTS During the study period 2210 C-CS and 6941 B-SL were implanted in 5314 patients. The mean follow-up time was 2288 days for C-CS and 2297 days for BS-L. There were 1038 events of which 157 (15.1%) were stent thromboses. Treatment with C-CS was associated with lower risk for restenosis or stent thrombosis up to one year from index procedure (HR 0.41; 95% CI 0.32-0.52; P<0.001). However, after one-year of follow-up, the risk was substantially higher in C-CS (HR 2.81; 95% CI 2.25 - 3.50; P<0.001).

CONCLUSIONS In this observational study, treatment with C-CS-a first-generation DES-was not associated with better outcome than BS-L-a contemporary BMS. Continuation of restenosis and stent thrombosis events long after the index procedure with C-CS stent are of major concern for patient safety.

GW27-e1246

Prognostic Impact of Thrombus Aspiration in Patients with STEMI: A Report from the Swedish Coronary Angiography and Angioplasty Registry

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OBJECTIVES Routine intracoronary thrombus aspiration before primary percutaneous coronary intervention (PCI) in STEMI patients does not seem to reduce mortality but may reduce stent thrombosis and reinfarction. The aim of this observational study was to evaluate the impact of thrombus aspiration on mortality and stent thrombosis using all available data from the national all-inclusive Swedish Coronary Angiography and Angioplasty Registry (SCAAR).

METHODS We included all consecutive patients registered in SCAAR between January 2005 and September 2014 undergoing PCI for STEMI. We used instrumental variable analysis (for hidden selection bias) with propensity score to evaluate the effect of thrombus aspiration on stent thrombosis and mortality at thirty-days and one-year. Administrative region was employed as treatment-preference instrumental variable using two-stage least squares regression. The variables used to calculate the propensity score were: age; sex; hypertension; hyperlipidemia; smoking status; diabetes; arterial access site; severity of coronary artery disease; completeness of revascularization; prior MI, coronary by-pass surgery and/or PCI; use of drug-eluting stents; cardiogenic shock and procedural success. In a substudy (n=155), we evaluated the effect of thrombus aspiration on coronary flow reserve at one week and at four months after primary PCI. Coronary flow reserve was evaluated by measuring coronary flow velocity in the left anterior descending artery with transthoracic color Doppler echocardiography before and during adenosine infusion (140 microgram/kg/min). We modelled predictive value of thrombus aspiration on coronary flow reserve by means of propensity score adjusted linear regression.

RESULTS In total, 42,645 patients were included in the study of whom 10,653 (25%) were treated with thrombus aspiration. There were 2659 (6.2%) deaths at thirty-days and 3745 (8.7%) at one-year and 255 (0.5%) cases of stent thrombosis at thirty-days and 409 (0.9%) at one-year. Mortality was not different between the groups at thirty-days (b -0.019; 95% CI -0.063 to 0.024; P=0.56) or at one-year (b -0.017; 95% CI -0.073 to 0.039; P=0.38). Thrombus aspiration was associated with a lower risk of stent thrombosis both at thirty-days (b -0.031; 95% CI -0.045 to -0.016; P<0.001) and at one-year (b -0.033; 95% CI -0.051 to -0.015; P<0.001). However, a landmark analysis after thirty-days showed no effect of thrombus aspiration on stent thrombosis at one-year (b -0.0027; 95% CI -0.014 to 0.0081;