CONCLUSIONS CR was seen more commonly in elderly men at peril of inferolateral location 4 days after AMI in recent groups. Plaque rupture is less common; however, severe three vessel coronary artery disease is seen more frequently.

CATEGORIES CORONARY: Acute Coronary Syndromes

TCT-176
Staged Versus “One-time” multivessel revascularization in patients with non-ST-segment elevation acute coronary syndromes
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BACKGROUND To compare the long-term clinical outcomes of staged percutaneous coronary intervention (PCI) and “one-time” PCI in patients with non-ST-segment elevation acute coronary syndromes (NSTE-ACS) and multivessel coronary disease (MVD).

METHODS From 2009 to 2012, a total of 1414 consecutive NSTE-ACS patients that underwent PCI of culprit and nonculprit lesions for multivessel disease in General Hospital of Shenyang Military Region were prospectively registered. Patients received “one-time” PCI (n=829) or staged PCI (n=592) according to physician’s discretion. The primary outcome was the composite of cardiac death or myocardial infarction (MI).

RESULTS Baseline and angiographic characteristics showed staged patients had a worse clinical presentation. The estimated 3-year composite rate of cardiac death or MI was 6.2% for staged PCI, 6.8% for “one-time” PCI (log-rank test: p=0.536). At multivariate analysis, staged PCI was an independent predictor of cardiac death or MI (hazards ratio [HR]:0.581, 95% confidence interval [CI]:0.356-0.948, p=0.022). In a propensity score matched cohort, staged PCI was associated with a significantly lower risk of cardiac death or MI compared to “one-time” PCI (4.5% vs 8.8%, HR 0.466, 95% CI: 0.247-0.879, p=0.016). Subgroup analysis suggested staged PCI might be considered in patients with high risk such as old age, renal dysfunction, diabetes mellitus, previous MI or high GRACE risk score.

CONCLUSIONS Staged PCI is optimal revascularization strategy for patients with NSTE-ACS, especially high-risk patients, with a lower composite rate of cardiac death or MI compared to “one-time” PCI. Randomized-control trial was needed to confirm this result.

CATEGORIES CORONARY: Acute Coronary Syndromes

KEYWORDS Multivessel percutaneous coronary intervention, Non-ST-segment elevation acute coronary syndromes

TCT-177
Old Saphenous Vein Grafts with important degeneration treated with self-expandable drug-eluting stents: our experience
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BACKGROUND The percutaneous treatment of the obstructive atherosclerotic disease in coronary saphenous bypass grafts remains a challenge in interventional cardiology. Treatment of degenerated saphenous vein grafts still involves a high risk of immediate embolic complications, high incidence of target lesion revascularization and progression of the disease on adjacent segments and often difficulty in the evaluation of the caliber and discrepancy in size in presence of aneurysm. Aim: to evaluate if the use of self-expandable stents may offer an advantage compared to balloon-expandable stents.

METHODS Self-expandable stents may solve the problem of the discrepancy in size, they can be used in presence of aneurysms or of widespread disease of the graft implying a lower risk of malapposition, with less acute thrombosis. They don’t require a heavy post-dilatation implying a lower risk of thromboembolism and parietal damage and less the related risk of in-stent restenosis, edge-restenosis and deterioration of adjacent segments. At this purpose we adopted the “soft touch technique” which consists in direct stenting (if possible) and postdilatation limited to the most stenotic portion of the graft using undersized balloons (ratio balloon /vessel diameter; 0.8). Self-expandable stents increase in diameter in the days following the procedure, this may reduce the incidence of plaque rupture and distal embolization.

RESULTS Between October 2012 and May 2015 we treated 25 patients. 16 patients presented with acute coronary syndrome with evidence of soft plaque and intraluminal thrombus. Mean age of the grafts: 12 years (4-21 years). In 10 cases we used a distal embolic protection filter. All patients had anamnestic dilatation of the graft (maximum diameter of the vessels between 6 and 7 mm). No major complications occurred. In one case we implanted a balloon expandable stent at distal edge of self-expandable stent for distal dissection of the vessel with a good final result. In one case we experienced an in-stent restenosis due to distortion of the stent struts caused by the guidewand, this ostial lesion was treated successfully with a balloon-expandable stent implantation. Good angiographic result in all cases (final TIMI flow III). Cardiovascular computed tomography performed after 3 months confirmed the patency of the stents. All patients remained asymptomatic during follow-up.

CONCLUSIONS The treatment of degenerated coronary saphenous vein grafts with self-expandable stents and “soft touch technique”, being less aggressive on the graft, may reduce the risk of distal embolization and therefore of periprocedural infarction. This technique implying a minor parietal trauma, may also reduce the incidence of restenosis and solve the problem of mismatch of caliber and widespread disease preventing the implantation of additional stents. Larger and appropriate studies are needed to determine differences, optimize clinical practice and validate our hypothesis.

CATEGORIES CORONARY: Acute Coronary Syndromes

KEYWORDS Saphenous vein graft, Self-expanding stent, STENTYS

TCT-178
Spontaneous coronary artery dissection (SCAD): Predictors and Long-term outcome
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BACKGROUND Spontaneous coronary artery dissection (SCAD) is an unusual cause of acute coronary syndrome. Although the prognosis is good the management is not well established. Our purpose was to describe the clinical presentation, management and long term-outcomes of a retrospective cohort with SCAD.

METHODS A total of 37 patients registered in our institution from 2000 to 2014 were retrospectively studied. The definition of SCAD was based on the presence of medial dissection or intramural hematoma that was recognized by angiography and according with the classification proposed by Saw.

RESULTS 37 patients diagnosed as SCAD (male/female 15/22, age 54±12 [SD] years) were included in the analysis. The clinical presentation was myocardial infarction in 86.5% of patients. SCAD developed after physical or emotional stress in 4 patients (10%) and 7 patients (19%) had hypothyroidism. The left anterior descending artery was involved in 22 patients (60%) and left main was involved in 1 patient. 5 patients had multi-vessel SCAD (13.5%). Recurrences of SCAD were shown in 2 patients (5%). According to the classification proposed by Saw 21 patients (57%) had type 1 dissection (evident intramural mass), 11 patients (30%) had type 2 (diffuse thinning of varying severity) and 5 of them (13%) had type 3 (mimic atherosclerosis) dissection. Coronary artery tortuosity was present in 17 patients (46%) and it is significantly related with MACE (p = 0.001) and complications during PCI (p = 0.001). The management of SCAD was...
revascularization of the culprit lesion in 67.5% of patients (29 - PCI, 1-ACCT, 1 CABG) with in-hospital death of 8% (3 patients: 2 cases which the dissection progressed retrogradely during PCI and involved the left main and complicated by cardiogenic shock and 1 case involving also the aortic root), 21.6% of cases were initially treated with fibrinolysis which was also significantly related with MACE (p=0.001). PCI was successful in 99.7% of cases. 2 or more stents were needed in 50% of cases and the medium stent length was 46.7 ±32.4 mm [SD]. During a mean angiographic follow-up of 1023 days the 85% of them didn't have any images of dissection.

CONCLUSIONS The registry showed that after spontaneous dissection the prognosis in the long-term follow up is acceptable and most of the MACE occur during the acute phase. PCI of these types of lesions are generally successful but usually involve a long stent length. Tortuosity in coronary arteries, previous thrombolysis and the retrograde progression of dissection during PCI involving the left main are related to bad prognosis.

CATEGORIES CORONARY: Acute Coronary Syndromes

TCT-179 Comparison of Culprit-only versus Multi-vessel Percutaneous Coronary Intervention with 2nd Generation Drug-Eluting Stent in ST-elevation Myocardial Infarction: Data from INTERSTELLAR cohort

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BACKGROUND We compared the effect of culprit-only and multi-vessel disease percutaneous coronary intervention (MVD-PCI) with 2nd generation drug eluting stent (DES) in ST-segment elevation myocardial infarction (STEMI) with multivessel disease (MVD).

METHODS From 2009 to 2014, a total of 1541 consecutive patients with STEMI underwent primary PCI were analyzed retrospectively. Of all patients, 559 patients (zotarolimus-eluting stent: 32%, everolimus-eluting stent: 29%, biolimus-eluting stent: 10%, others 29%) with MVD were chosen and divided into culprit only PCI (n=270, 48%) and MVD-PCI (n=289, 52%). In addition, MVD-PCI was classified into simultaneous PCI at index procedure (n=210, 38%) and staged PCI (n=79, 14%) according to the way of PCI. Primary endpoint was cardiovascular (CV) death. The secondary endpoints was major adverse cardiac event (MACE) including CV death, MI, target vessel failure (TVF), admission from heart failure and stroke.

RESULTS Over a mean follow-up period of 23±19 months, there were 69 (12%) CV death and 114 (20%) MACE. Compared with culprit only PCI, MVD-PCI had a numerically lower CV death rate (10.1% vs. 14.7%, HR 0.64, p=0.07, CI 0.399–1.041, Figure A) and significantly lower MACCE rate (17.5% vs. 23.4%, HR 0.66, p=0.03, CI 0.458–0.961, Figure B). Of MVD-PCI patients, staged PCI showed numerically lower CV death rate (5.1% vs. 11.9%, HR 0.40, p=0.09, CI 0.141–1.667) and MACCE (12.7% vs. 19.0%, HR 0.63, p=0.20, CI 0.319–1.277) compared to simultaneous PCI.

CONCLUSIONS In 2nd generation DES era, MVD-PCI was associated with better long term outcomes compared to culprit-only PCI in patients with STEMI with MVD.

KEYWORDS Multivessel percutaneous coronary intervention, Myocardial infarction, acute

TCT-180 Predisposing and Precipitating Factors in Men with Spontaneous Coronary Artery Dissection

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BACKGROUND Spontaneous coronary artery dissection (SCAD) is an acute coronary event of a non-atherosclerotic etiology, and predominately affects younger women. SCAD remains underdiagnosed and a rare cause of myocardial infarction (MI) in men. Predisposing and precipitating factors remains poorly understood in men with SCAD.

METHODS Men with SCAD evaluated at Vancouver General Hospital were included in this cohort. Angiographic SCAD diagnosis was categorized as type 1 (multiple lumen), 2 (diffuse stenosis), or 3 (mimic atherosclerosis). Fibromuscular dysplasia (FMD) screening of renal, iliac, and cerebrovascular arteries were performed with catheter angiography, or computed-tomographic/magnetic-resonance angiography. Baseline predisposing and precipitating conditions, angiographic, revascularization, and in-hospital events were recorded.

RESULTS We identified 19 men with SCAD; their mean age was 46.7 ± 8.9 years. An precipitating stressor was readily identified in 14/19 (73.7%), with 8/19 (42.1%) performing extreme isometric exertion prior to SCAD. The other factors included 4 (21.1%) emotional/social stressors, 1 (5.2%) work stressor, and 1 (5.2%) due to severe illness. FMD was diagnosed in 9 (47.4%) men (4 had isometric exertion prior to SCAD). All presented with MI. ECG was abnormal in 68.4% (13/19) with 10.5% (2/19) having ST-segment elevation. Three (16%) men had multi-vessel SCAD. Majority had type 2 angiographic SCAD 57.9% (11), 36.8% (7) had type 1, and 5.3% (1) had type 3. The majority 84.2% (16) were treated conservatively, 15.8% (3) underwent percutaneous coronary intervention (2 with DES and 1 with BMS). One patient died within 30 days due to septic shock from ulcerative colitis. During mean follow-up of 10 ± 13 months, 2 (10.5%) had a recurrent SCAD event. One patient also had dissection of his carotid artery prior to his SCAD event.

CONCLUSIONS In our small cohort of men with SCAD, patients either had FMD or performed severe isometric exertion as their predisposing or precipitating factor for their SCAD event.

CATEGORIES CORONARY: Acute Coronary Syndromes

KEYWORDS Spontaneous coronary artery dissection

TCT-181 Uric acid is neither the risk factor nor prognostic factor for clinical outcomes during 3-year follow-up period in coronary vasospastic angina

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BACKGROUND It has been reported that a major cause of coronary vasospastic angina (VSA) is endothelial dysfunction of the coronary artery. Some studies showed that serum uric acid is correlated with endothelial dysfunction. However, it is controversial that uric acid is associated with coronary vasospastic angina and there has been no study for uric acid to become prognostic factor in coronary vasospastic angina.

METHODS A total 3828 patients (pts) undergoing coronary angiography with acetylcholine provocation test from Mar 2004 to Sep 2012 from prospective spasm registry of Cardiovascular Center of Korea University Guro Hospital were enrolled. The definition of positive coronary spasm test was defined as coronary vasospasm of more than 70%. The level of serum uric acid was categorized into each quartile group; less than 3.8, 3.9–4.7, 4.8–5.7, and more than 5.8 mg/dL. Major adverse cardiovascular events (MACEs) were defined as the composite end-point consisted of recurrent chest pain requiring repeat coronary angiography, cardiac death, myocardial infarction, and cerebrovascular disease. The duration of follow-up for MACEs was 3-year. The rate of follow-up was the 2340 of 3828 pts (61.1%).

RESULTS There was no statistical significance in the level of serum uric acid between negative and positive coronary spasm groups in