

assess whether the ACC/AHA lesion classification continues to predict in-hospital, 30-day, and 12-month clinical outcomes in contemporary PCI.

METHODS We analyzed clinical characteristics and outcomes according to ACC/AHA lesion classification (A, B1, B2, C) in 13,701 PCI cases from the Melbourne Interventional Group (MIG) registry. Patients presenting with STEMI, cardiogenic shock and out of hospital cardiac arrest were excluded. We assessed in-hospital, 30-day, and 12-month clinical outcomes based on ACC/AHA lesion classification.

RESULTS Patients with type C lesions (18%) were more likely to be older and have impaired renal function, diabetes, previous myocardial infarction, peripheral vascular disease and prior bypass graft surgery (all $p < 0.01$). Type C lesions were more likely to be bifurcation, ostial and chronic total occlusions and required larger sheath sizes (> 6 French), rotational atherectomy, drug-eluting stents and longer stent length (all $p < 0.01$).

	A (n=1246)	B1 (n=5519)	B2 (n=4449)	C (n=2487)	P-value
Success	99.6%	99.1%	96.6%	82.7%	< 0.01
Perforation	0.1%	0.2%	0.1%	0.9%	< 0.01
No reflow	1.7%	1.5%	3.2%	3.9%	< 0.01
Unplanned CABG	0.1%	0.1%	0.7%	1.9%	< 0.01
Inhospital Bleeding	1.8%	1.4%	1.5%	1.7%	0.72
30-day MACE	2.1%	2.0%	3.8%	6.3%	< 0.01
12-month MACE	9.2%	9.9%	12.9%	16.5%	< 0.01

CONCLUSIONS ACC/AHA lesion classification is still relevant and predictive of in-hospital and long-term outcomes, and should still be calculated pre-procedure to predict PCI success and outcomes.

CATEGORIES CORONARY: PCI Outcomes

KEYWORDS Classification, Outcomes, medium-term, PCI - Percutaneous Coronary Intervention

TCT-472

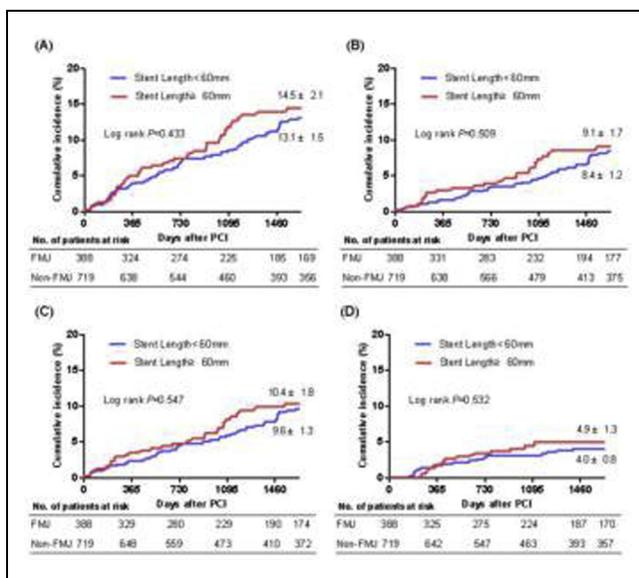
Clinical outcomes of “Full Metal Jacket” procedure after Percutaneous Coronary Intervention for Chronic Total Occlusion

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BACKGROUND Although percutaneous coronary intervention (PCI) of chronic total occlusion (CTO) lesions commonly require ‘full metal jacket’(FMJ, stent length ≥ 60 mm without gaps) procedure to cover full coronary artery lesions, long-term clinical outcomes after FMJ procedure in CTO lesions remain largely unknown.

METHODS From Asan Medical Center-CTO registry, 388 consecutive patients treated with FMJ procedure and 719 with non-FMJ procedure were identified. The primary endpoint was the incidence of major adverse cardiac events (MACE) defined as a composite of death, Q-wave myocardial infarction (MI), or target-vessel revascularization (TVR).

RESULTS During a median follow-up of 4.5-years, the cumulative incidence of all-death were not significantly different between patients who underwent FMJ and non-FMJ procedure (9.1% vs. 8.4%, $P=0.51$). After adjusting confounders, there was no significant difference between patients who received FMJ and non-FMJ procedure for the risk of MACE. (Hazard ratio [HR] 1.19, 95% confidence interval [CI] 0.80-1.75, $P=0.39$). The adjusted risk of death (HR 1.28, 95% CI 0.78-2.12, $P=0.33$), Q-wave MI (HR 0.93, 95% CI 0.30-2.89, $P=0.90$) and TVR (HR 1.22, 95% CI 0.63-2.37, $P=0.56$) were similar between the two groups. The incidence of definite/probable stent thrombosis was comparable (1.6% vs.1.1%, $P=0.58$) throughout the follow-up period.



CONCLUSIONS The 4.5-year clinical outcomes of patients after CTO-PCI with FMJ procedure were comparable from those with non-FMJ procedure.

CATEGORIES CORONARY: PCI Outcomes

KEYWORDS Clinical outcomes, Complete coronary occlusion, Lesion length

TCT-473

Two-year outcomes of Japan unprotected left main coronary artery disease PCI strategy on new generation stents (J-Lesson) registry

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BACKGROUND The SYNTAX study showed significant improvement in the efficacy of PCI using 1st generation DES for unprotected left main coronary artery (LMCA) disease. It has been proposed that the 2nd generation DES will provide better PCI outcomes for LMCA compared with SYNTAX trial. In Japan, PCI was frequently conducted with the guidance of IVUS. These procedural characteristics may further contribute to the improvement of PCI outcomes for LMCA.

METHODS J-Lesson is a prospective, single arm, open study that enrolled 441 unprotected LMCA treated with everolimus eluting drug eluting stent (EES) at 54 institutes in Japan. SYNTAX score and quantitative coronary angiogram was evaluated by independent core-laboratory. Primary end point of the present study was major adverse cardio-cerebrovascular event (MACCE) and MACCE+TVF was secondary end point. It is scheduled to follow-up for 5 years.

RESULTS In baseline characteristics, 40.4 % was DM and 36.8 % of the subjects had a history of PCI. The history of MI, stroke and PAD was observed in 18%, 8.9%, and 7.5%, respectively. Subjects were subdivided according to SYNTAX score (Low < 23 n=202, Intermediate 23-32 n=146, High > 32 n=81). Euroscore 3-5 was 45.4% and > 6 was 24.9%. IVUS guided PCI was undertaken in 97.5%. Number of stent/lesion was 1.3 and mean stent length was 29.3mm. Interim analysis of 373 pts (84.6%) demonstrated that MACCE rate at 2 year was 3.9% (2.1-5.75) and no difference among 3 different SYNTAX score group. MACCE was also not different according to EuroSCORE. MACCE+TLR at 2 year was significantly higher in SYNTAX high group compared with the other 2 groups (SYNTAX low 4.5%, intermediate 8.9%, high 19.8%) and did not differ among 3 groups. Complete follow-up data will be available at TCT 2015.

CONCLUSIONS The J-lesson registry demonstrated clinical outcomes of PCI for LMCA with the combination use of 2nd generation DES and IVUS. The present outcomes support the clinical efficacy of PCI for LMCA. In addition, SYNTAX score is useful tool to discriminate the future revascularization risk, but could not discriminate the MACCE risk.

CATEGORIES CORONARY: PCI Outcomes

KEYWORDS Drug-eluting stent, second generation, IVUS, Left main coronary artery

TCT-474

Abstract Withdrawn

TCT-475

Two-stent Strategies for Coronary Bifurcation Lesions: Main Vessel First Versus Side Branch First

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BACKGROUND Although main vessel (MV) stenting with provisional side branch (SB) treatment is regarded as a standard strategy for coronary bifurcation lesions, two-stent strategies are needed substantially in real-world practice and cross-overs from one-stent to two-stent strategies were observed frequently in randomized controlled trials. However, there are limited data comparing different methods of two-stent strategies. We sought to compare two-stent strategies for coronary bifurcation revascularization using a MADS classification: main across side first or SB first techniques.

METHODS Among patients who underwent drug-eluting stents implantation for bifurcation lesions with SB ≥ 2.3 mm, we selected 673 patients treated with two-stent strategies including main across side first or SB first techniques. The primary outcome was major adverse cardiac events (MACE: cardiac death, myocardial infarction, or target lesion revascularization).

RESULTS SB first techniques were performed in 423 (62.9%) patients. After propensity score matching, we created matched pairs with 363 patients treated with SB first techniques and 161 patients treated with MV first techniques. SB occlusion (3.6% versus 11.2%, $p=0.002$) occurred less frequently in patients treated with SB first techniques. During median 3-year follow-up, the rate of MACE was similar in two groups (14.3% vs. 17.4%; hazard ratio [HR], 0.94; 95% confidence interval [CI], 0.57-1.54; $p=0.80$). In patients treated with two-stent techniques, final kissing balloon inflation (HR, 0.48; 95% CI, 0.31-0.77; $p=0.002$) and use of non-compliant balloon (HR, 0.48; 95% CI, 0.30-0.78; $p=0.003$) were independent predictors of favorable outcomes. The implantation of second-generation drug-eluting stents had a higher tendency for favorable outcomes (HR, 0.41; 95% CI, 0.17-1.03; $p=0.06$).

Table. Predictors of clinical outcomes in patients treated with two-stent technique

	Hazard ratio (95% CI)	p Value
Left main bifurcation	2.23 (1.50-3.33)	<0.001
Diabetes mellitus	1.43 (0.95-2.15)	0.08
MV lesion length per 10 mm	1.15 (1.02-1.31)	0.02
Final kissing balloon inflation	0.48 (0.31-0.77)	0.002
Use of non-compliant balloon	0.48 (0.30-0.78)	0.003
Second-generation DES	0.41 (0.17-1.03)	0.06

CONCLUSIONS The clinical outcomes were similar for patients with coronary bifurcation lesions treated with main across side first or SB first two-stent techniques. Final kissing balloon inflation and use of non-compliant balloon might improve the clinical outcomes in patients with coronary bifurcation lesions requiring two-stent strategies.

CATEGORIES CORONARY: PCI Outcomes

KEYWORDS Bifurcation stenting, Drug-eluting stent, Two-Stent

TCT-476

Clinical outcomes of unprotected left main coronary artery disease in Korean single center

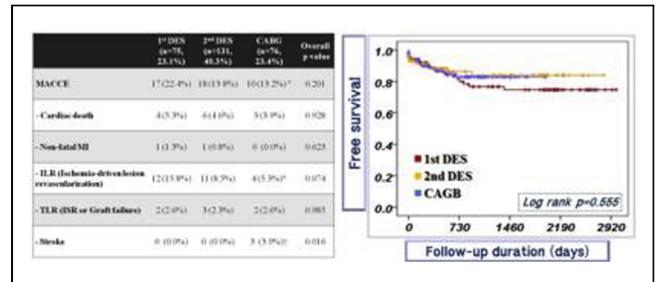
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BACKGROUND Patients with unprotected left main coronary artery disease (ULMCAD) are increasingly treated with percutaneous coronary intervention (PCI) using drug-eluting stents (DES), but its benefits compared with coronary artery bypass grafting (CABG) remain controversial. The aims of this study access to clinical outcomes of ULMCAD.

METHODS The study was a retrospective analysis of the findings in 282 patients with ULMCAD between 2006 and 2013 at Daegu catholic university medical center. ULMCAD was defined as 50% \leq luminal stenosis in coronary angiogram. The patents were divided three groups according to management: PCI with 1st generation DES (n=75, 23.1%), PCI with 2nd generation DES (n=131, 40.3%) and CABG (n=76, 23.4%). First generation DES was included sirolimus eluting stent (SES, n=36, 46.2%), paclitaxel eluting stent (PES, n=29, 37.2%), zotarolimus eluting stent (ZES, n=13, 16.7%). Second generation DES was included everolimus eluting stent (EES, n=89, 68.4%), zotarolimus eluting stent (ZES, n=30, 23.1%), biolimus eluting stent (BES, n=11, 8.5%). The clinical outcomes were all cardiac events, defined as cardiac death, nonfatal myocardial infarction (MI), repeat revascularization (ILR: ischemia-driven lesion revascularization, TLR: ISR or graft failure) and stroke. (major adverse cardiac and cerebrovascular events: MACCE)

RESULTS There were no differences of clinical, laboratory and echocardiographic characteristics in three groups. PCI with 1st generation DES for UPLMD was significantly associated with higher MACCE rate compared with CABG. However, PCI with 1st and 2nd generation DES was significantly associated with lower stroke rate compared with CABG. (Figure) Stratifying our patients by PCI with 1st generation DES, PCI with 2nd generation DES and CABG, Kaplan-Meier curves showed that by PCI with 1st generation DES has a higher prognostic value compared with PCI with 2nd generation DES and CABG.

CONCLUSIONS In the 2nd generation DES, PCI for ULMCAD could be associated with equivalent mortality, MI and repeat revascularization, and lower stroke rates compared with CABG.



CATEGORIES CORONARY: PCI Outcomes

KEYWORDS Coronary artery bypass grafting, Left main coronary artery disease, PCI - Percutaneous Coronary Intervention

TCT-477

Normalized Troponin Increase to Area at Risk for Procedural Myonecrosis Assessment and Prognostication After Percutaneous Coronary Intervention in Coronary Bifurcation Lesions - Insights From Intracoronary Electrophysiology Based Strategy for the Treatment of Coronary Bifurcation Lesions.

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BACKGROUND Study aims: There is still debate about the prognostic utility of troponin rise after percutaneous coronary intervention (PCI). We assessed relation between normalized troponin concentration after PCI to area at risk (assessed by Bypass Angioplasty Revascularization Investigation (BARI) angiographic risk score) and ischemic area at the end of coronary bifurcation PCI, assessed by the means of sustained ST-segment elevation on intracoronary electrocardiography (icECGSTE).