TCTAP A-062

Incidence, Predictors and Outcomes of Transient Slow Coronary Flow Appearing Just After Paclitaxel-Coated Balloon Angioplasty

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BACKGROUND It has been established the effectiveness of paclitaxel-coated balloon (PCB) catheter in patients with in-stent restenosis. However, the transient slow coronary flow (TSCF), which may cause the myocardial damage, was sometimes observed just after the dilation of PCB in the clinical trials. The purpose of this study was to investigate the incidence, predictors and outcomes of TSCF just after PCB angioplasty.

METHODS We enrolled 21 patients who underwent the elective PCB angioplasty for in-stent restenosis. We assessed the troponin-I level 12-18 hours after PCB angioplasty. TSCF was defined as the decrement of TIMI grade appearing just after PCB angioplasty.

RESULTS Final TIMI grade 3 was obtained in all patients. There was a trend that TIMI frame count was greater just after PCB inflation (39.4±19.2 vs. 35.4±18.3, p=0.1). The TSCF just after PCB angioplasty was observed in 8 (38%) patients. Most patients of TSCF group showed prior myocardial infarction (87.5% vs. 15.4%, p=0.002). There was no significant difference in troponin-I level between two groups [TSCF (+) vs. (-): 0.38±0.86 vs. 0.50±1.42 ng/mL, p=0.85].

CONCLUSION TSCF just after PCB angioplasty was not a rare phenomenon, associated with prior myocardial infarction. This phenomenon was not related to troponin-I level elevation.

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Three-Year Comparison of Lesional Outcomes of Long Versus Short Drug-Eluting Stent in One Patient with Two Vessel Disease

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BACKGROUND Diffuse long lesion of coronary artery remains difficult to treat in the era of drug-eluting stent (DES). The purpose of this study is to compare lesional outcomes of long and short stent implantation in one patient with two vessel disease.

METHODS From May 2005 to August 2011, a total of 154 patients with 308 lesions who had two vessel disease and performed percutaneous coronary intervention (PCI) with long and short DES for the two lesions was enrolled. Long segment stent was defined as implantation of DES over 50 mm and short less than 50mm. Same kinds of DES were used in one patient. Angiographic follow-up was done at 8 months and clinical follow-up was done for 36 months. The study end-points were angiographic late loss, the rate of in-stent restenosis (ISR) defined as $\geq$ 50% of a diameter stenosis and major adverse cardiac events (MACE) including all-cause death, target lesion revascularization (TLR), target vessel revascularization (TVR) and lesion related myocardial infarction (MI).

RESULTS Stent length was 61.6 ± 11.6 mm in long lesion and 25.4 ± 8.5 mm in short lesion. Follow-up angiography was performed in 50% (77/154). In-stent restenosis was observed in 7.8% in long lesion and 3.9% in short lesion (p=0.145). Late loss at 8 months was statistically significant (0.62 ± 0.61 mm in long lesion vs. 0.38±0.66 mm in short lesion, p=0.024). Target lesion revascularization was observed in 5.8% in long lesion and 2.6% in short lesion (p=0.156). Target vessel revascularization was observed in 5.8% in long lesion and 3.2% in short lesion (p=0.274). Total MACE was observed 8.4% in long lesion and 6.5% in short lesion (p=0.516).

CONCLUSION There was higher late loss in long lesion than short lesion. However, clinical outcomes between long and short lesion for 36 months were not different. Further longer term follow-up and larger population study will be needed.

TCTAP A-064

Characteristics of Coronary Stent Fracture After Stents Implantation

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BACKGROUND Coronary stents were more widely used in treatment of narrowed coronary artery. As a relatively rare complication, characteristics of coronary stent fracture deserve to be made certain. The study was to investigate the clinical, angiographic and procedural characteristics of coronary stent fracture.

METHODS From January 2006 to August 2014, 6579 patients received stents implantation. The angiograms of all 2407 patients who underwent repeat angiography were studied to identify the presence of stent fracture. The clinical, angiographic, procedural, and structural factors which might predispose to stent fracture were systematically analyzed.

RESULTS 1) Stent fracture was identified in 6 patients. The median time interval from stent implantation to detection of fracture at repeat angiography was 398 days (range: 220～2516 days). 1 stent fracture occurred in left anterior descending artery (LAD) in one patient presented with acute ST-elevation myocardial infarction (STEMI). 6 stent fractures in 5 cases who presented with unstable angina (UAP) or asymptomatic occurred in right coronary artery (RCA). 2) 5 stent fractures occurred at tortuous segment of coronary artery with minor angulation, but with apparent calcification. The original lesions where fractured stents deployed were RCA chronic total occlusion (CTO) or sub-CTO in 4 patients. 3) 5 patients have overlapping stents, 3 patients underwent post dilatation with high-pressure balloons. 4) Stents fracture occurred near the joint site of overlapping stents in 5 cases. Complete transverse disarticulation occurred in 4 patients. Acute stent thrombosis secondary to stent fracture occurred in one patient, binary focal restenosis associated with fracture was detected in 3 patients, and both of them underwent repeat drug-eluting stenting.

CONCLUSION Predisposing clinical and procedural factors may be associated with the characteristics of diseased vessel and use of long stent, overlapping stents and post dilatation with high-pressure balloons. Stent fracture more occurred at tortuous segment, near the joint site of overlapping stents in RCA. Patients with stent fracture may be asymptomatic, but restenosis and thrombosis may be the principal adverse events in a few patients.

HIGH RISK PATIENTS: DIABETES, HEART FAILURE, RENAL FAILURE, OTHERS (TCTAP A-065 TO TCTAP A-072)

TCTAP A-065

Which Biomarker Can Predict Higher Syntax Score?

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BACKGROUND Syntax Score is an anatomical score of Coronary angiograghy to predict outcome of revascularization by Percutaneous Coronary Angioplasty or Coronary Artery Bypass grafting Surgery. There were no laboratorium biomarker data to predict Syntax Score.

METHODS Patient who underwent coronary angiography and severity evaluated by Syntax Score and Clinical Syntax Score and blood examiner to determine the neutrophyl - lymphocyte ratio, basophyl, eosinophyl, monocyte, hemoglobin, hematocrit, liver function other factors, hs - CRP, total cholesterol, LDL cholesterol, HDL cholesterol, triglycerides, and of functions ureaum, creatinine , HbA1C and the other biomarker.

RESULTS One hundred and five patients, 82 % male and 18% female, 16 patients (15 %) without any symptom of ischemic, 4 patients (3.8 %) angina pectoris ccs I, 30 patients (29 %) angina pectoris ccs II, 32 patients (30 %) angina pectoris ccs III, 21 patients (20 %) angina pectoris ccs IV There were no correlation between higher syntax score $\geq$ 34 Hypertension (25.5 vs 22.43, p=0.227), diabetes (25.25 vs 22.97, p=0.38) dyslipidemia (23.77 vs 23.79 p=0.997). analysis linear regression only ureum has significant correlation to higher syntax score $\geq$ 34 (p = 0.016 and 95% confidence interval 0.05-0.55).

Predict higher Syntax Score $\geq$ 34 can be used by module =

RISK Syntax 34 = -3.126967+ 0.9225703*HDL40 + 1.423749*Ureum23 + 0.8085509*Rasio + 0.2834972*HBA1C_6.5 +0.8379034*monosit9).

= 35 (HDL ≤ 40 mg / dL) + 43 (ureum ≥ 23 mg / dL) +25 (Neutrphyl-lymphocyte ratio ≥ 3.789474) +10 (HBA1C≥ 6.5 %) + 29 (Monocyte ≥9 %)

Probability/Risk Syntax Score 34= Probablitas/Risk Syntax Score 34 :

$$= \frac{1}{1+e^{-(-3.126967 + 0.9225703*HDL40 + 1.423749*Ureum23 + 0.8085509*Rasio + 0.2834972*HBA1C\_6.5 + 0.8379034*monosit9)}}$$

CONCLUSION Biomarker Ureum, HDL Cholesterol, Ratio Neutrophyl - Limphocyte level , HbA1c, and Monocyte will predict patient high risk with Syntax score more than 34.