BACKGROUND Prolonged dual antiplatelet therapy (DAPT) after coronary stent implantation is associated with higher risk for bleeding. Second-generation drug-eluting stents (G2-DES), cobalt-chromium everolimus-eluting stent (CoCr-EES) in particular, are reported to have lower risk for stent thrombosis (ST) compared with first generation DES or bare-metal stents. Therefore, the optimal DAPT duration after CoCr-EES implantation could be shorter than 6-12 months currently recommended in the guidelines. However, there has been no prospective study evaluating DAPT duration shorter than 6 months after CoCr-EES implantation.

METHODS STOPDAPT study is a prospective multicenter single-arm registry enrolling patients who agreed to follow the 3-month DAPT protocol (discontinuation of clopidogrel at 2- to 4-month and aspirin monotherapy thereafter) after successful CoCr-EES implantation. The primary endpoint was a composite of cardiovascular (CV) death, myocardial infarction (MI), stroke, definite ST and TIMI major/minor bleeding at 1-year. As a historical comparison group, we selected the CoCr-EES group in the RESET trial comparing CoCr-EES with sirolimus-eluting stent conducted in 2010, where nearly 90% of patients had continued DAPT at 1-year. With the 6.6% of performance goal based on the event rate of 4.4% in the RESET trial, a total of 1500 patients would yield 95% power at a level of one-sided type 1 error of 0.025.

RESULTS Between September 2012 and October 2013, a total of 1525 patients were enrolled in the study from 58 participating centers across Japan, and 1-year follow-up was completed in 1519 patients (99.6%). Thienopyridine was discontinued within 4-month in 1444 patients (94.7%). The event rates beyond 3-month were very low (CV death: 0.5%, MI: 0.1%, definite/probable ST: 0%, stroke: 0.7%, and TIMI major/minor bleeding: 0.8%). Cumulative 1-year incidence of the primary endpoint was 2.8% (Upper 97.5% confidence interval [CI] 3.6%), which was lower than the pre-defined performance goal of 6.6% (P<0.0001). Compared to CoCr-EES group in the RESET trial, cumulative incidence of the primary endpoint tended to be lower in the STOPDAPT than in the RESET (2.8% versus 4.0%, P=0.06) and adjusted hazard ratio was 0.64 (95%CI 0.42-0.95, P=0.03). The cumulative incidence of definite/probable ST was lower in the STOPDAPT than in the RESET (0 patient [0%] versus 5 patients [0.3%], P=0.03).

CONCLUSIONS Stopping DAPT at 3-month after CoCr-EES implantation was at least as safe as the prolonged DAPT regimen adopted in the previous randomized trial.

CATEGORIES CORONARY: Stents: Drug-Eluting

KEYWORDS Antiplatelet therapy, Dual antiplatelet therapy, Everolimus-eluting stents

TCT-557

New Generation Drug-eluting Stents vs. Bare Metal Stents for Primary Angioplasty in Patients > 75 Years With ST Elevated Myocardial Infarction: The ESTROFA-MI+75 study

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BACKGROUND Primary angioplasty is the best reperfusion treatment in ST elevated myocardial infarction. The prevalence of very elderly patients (> 75 years) undergoing primary angioplasty is progressively increasing as population is ageing. The benefit of the new generation drug-eluting stents over bare metal stents in terms of safety and efficacy is unknown for this important subgroup of patients in this setting.

METHODS Retrospective consecutive registry conducted in 31 centers of patients > 75 years with ST elevation myocardial infarction undergoing primary angioplasty.

RESULTS A total of 3,126 pts have been included, 2,132 (68.2%) treated with BMS and 994 (31.8%) treated with new generation DES. After exclusion of patients presenting with cardiogenic shock or requiring cardiac surgery for mechanical complications (14%) a propensity score matching was performed yielding two comparable groups of 580 patients each with well- balanced baseline clinical or angiographic characteristics. Outcomes at 12 months were: cardiac death and MI 10.2% with BMS and 5.2% with DES (p=0.01), TLR was 3.8% with BMS and 1.5% with DES (p=0.04), definite or probable thrombosis 4.3% with BMS and 2.4% with DES (p=0.06), definite thrombosis 3.7% with BMS and 1.3% with DES (p=0.03) and bleeding BARC > 2 0.7% with BMS and 1.2% with DES (p=0.3).

CONCLUSIONS In this registry of patients over 75 years undergoing primary angioplasty, most were treated with BMS. After propensity score matching clinical outcomes were significantly better in those treated with new DES without significant increase in severe bleeding events in follow up.

CATEGORIES CORONARY: Stents: Drug-Eluting

KEYWORDS Acute myocardial infarction, Drug-eluting stent, Elderly

TCT-558

Simple Versus Complex Stenting in Unprotected Left Main Bifurcation Coronary Intervention: A Comprehensive Meta-analysis

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BACKGROUND Percutaneous intervention of distal bifurcation unprotected left main coronary arteries (UPLMCA) are technically demanding with less favorable outcomes. The optimal treatment strategy to improve long-term outcomes is uncertain.

METHODS Studies comparing simple approach (provisional stenting) versus complex stenting (elective two stent technique) were considered for inclusion. A search strategy using Medline, Embase, Cochrane database and the proceedings of the international meetings were included. Information about study design, inclusion criteria and sample characteristics were extracted. Meta-analysis of pooled event rates was compared between these two stenting approaches.

RESULTS 16 studies including 5978 patients who were treated with simple versus complex bifurcation stenting for UPLMCA bifurcations were analyzed. There were no differences in the rates of myocardial infarction (OR 0.81, CI 0.15-4.2), stent thrombosis (OR 0.8, CI 0.2-1.7), target vessel revascularization (OR 0.4, CI 0.6-2.7) or mortality (OR 0.92, CI 0.3-2.8) between simple versus complex stenting approaches at 1 year. However, at 5 years of follow-up there was a significant difference in the rates of target vessel revascularization (OR 0.4, CI 0.3-0.7, p=0.001) favoring the simple approach. There was no difference in the mortality (OR 0.94, CI 0.75-1.19), stent thrombosis (OR 0.83, 0.32-2.1) or myocardial infarction (OR 1.16, CI 0.7-1.7) using either approach at 5 years of follow-up.

CONCLUSIONS Percutaneous intervention for UPLMCA should favor a simple approach over complex approach to optimize long-term outcomes.

CATEGORIES CORONARY: Stents: Drug-Eluting

KEYWORDS Left main bifurcation, Left main coronary artery, PCI - Percutaneous Coronary Intervention

TCT-559

Long-term Clinical and Angiographic Impact of Stent Fracture on Second Generation Drug-eluting Stent Implantation: Comparison between Xience Everolimus- and Nobori Biolimus-eluting Stents

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BACKGROUND Stent fracture (SF) after drug-eluting stent implantation has been reported to be associated with in-stent restenosis (ISR),