calcification ≥50%, and collateral vessels compared to arteries with CTO (p<0.001, all). Combination of these findings could distinguish CTO from STO (c-statistics=0.88, 95% CI=0.94-0.90), sensitivity=83%, specificity=77%, positive predictive value (PPV)=55%, negative predictive value (NPV)=93%, p<0.001). Percutaneous coronary intervention (PCI) was attempted in 342 arteries and was successful in 279 arteries (82%). CT findings could predict the unsuccesful PCI (c-statistics=0.70, (0.65-0.75), sensitivity=63%, specificity=73%, PPV=91%, NPV=31%, p<0.001).

CONCLUSIONS: Non-invasive coronary CT angiography could discern chronic total occlusion from subtotal occlusion, and also could predict the success of attempted PCI.

CATEGORIES: Imaging: Non-Invasive

TCT-62 Predicting Value of Platelet Reactivity on Bleeding and Major Adverse Cardiac Events in Eastern Asian Percutaneous Coronary Intervention Patients

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BACKGROUND: Previous studies have shown that high and low platelet reactivity (HRP and LPR respectively) are associated with adverse events following percutaneous coronary intervention (PCI), however, therapy windows were not consistent in different studies. We aimed to determine the optimal cutoff value of platelet reactivity to prevent major adverse events (MACE) and bleeding in eastern Asian PCI patients.

METHODS: Consecutive 6266 non-emergent PCI patients with aspirin and clopidogrel therapy were enrolled prospectively in the single-center, large-volume investigation from January to December 2013. Platelet reactivity (ADP-induced platelet-fibrin clot strength [MAADP]) was determined by thrombelastography. MACE and bleeding Academic Research Consortium (BARC) classification were assessed between different categories of platelet reactivity and Syntax Score (SS).

RESULTS: Overall, 475 MACE and 152 major bleeding (BARC grade ≥2) events were recorded during one year follow-up. With receiver operating characteristic (ROC) curve, we determined the cutoff values of MAADP for MACE and major bleeding (45 mm and 34 mm, respectively). Then, patients were classified according to MAADP (>45 mm, 34–45 mm, and <34 mm) and we evaluated the impact of platelet reactivity on MACE and major bleeding in different Syntax Score subgroups (SS<15 and SS≥15) with multivariable Cox survival analysis. In low SS group, MAADP >45 mm was the predictor of MACE (HR: 2.3; 95% CI: 1.6-5.9), but MAADP 34–45 mm did not show significant predictive value for major bleeding (HR: 1.3; 95% CI: 0.4-8.1). In high SS group, MAADP 45 mm was still the predictor of MACE (HR: 2.6; 95% CI: 1.3-6.3), while MAADP <34 mm show significant impact on major bleeding (HR: 1.8; 95% CI: 1.2-4.6).

CONCLUSIONS: Platelet reactivity measured by thrombelastography could predict MACE and major bleeding in elective PCI patients, especially in those with high SS. Therapy window of anti-platelet drugs is narrow in eastern Asian population and further studies on tailored treatment of high-risk patients are needed.

CATEGORIES: Coronary: PCI Outcomes

TCT-63 One Year Results Of The REMEDEE Registry: Clinical Outcomes After Deployment Of The Abluminal Sirolimus Coated Bio-Engineered Stent In A Multicenter, Prospective Post Market Registry

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BACKGROUND: Drug-eluting stents (DES) reduce angiographic restenosis and enhance event-free survival compared with bare-metal stents after implantation in coronary arteries. Limitations of current DES remain stent thrombosis and neo-atherosclerosis related to impaired healing, and repeat revascularization due to (late-) in-stent-restenosis. Endothelial repair can be substantially enhanced by CD34+ endothelial progenitor cells. The Combo stent combines a CD34+ antibody layer to attract endothelial progenitor cells, and thus promotes stent healing, with the abluminal release of sirolimus to prevent neo-intima formation and restenosis. The aim of this registry is to evaluate the long term safety and performance of the abluminal sirolimus coated bio-engineered stent in routine clinical practice.

METHODS: The multicenter, prospective, clinical outcomes after deployment of the abluminal sirolimus coated bio-engineered stent post market registry, the REMEDEE Registry, is an international registry to evaluate outcomes in an all-comers population of patients undergoing percutaneous coronary intervention with (attempted) Combo stent placement in the setting of routine clinical care. Baseline demographic, clinical, and angiographic data, as well as follow-up data up to five years will be obtained. Clinical endpoints are defined as a composite of cardiac death, non-fatal myocardial infarction (MI) not clearly attributable to a non-target vessel, or target lesion revascularization (TLR) (percutaneous or by coronary artery bypass grafting (CABG)) in consecutive patients undergoing percutaneous coronary coronary intervention with (attempted) Combo stent placement. All events will be adjudicated by an independent Clinical Events Committee. Cumulative event rates are estimated by a Kaplan-Meier model.

RESULTS: A total of 1000 patients were included in 9 European sites between June 2013 and March 2014, of which 30.4% patients presenting with acute coronary syndrome (ACS) (17.8% ST-segment elevation myocardial infarction). Mean age was 65±11 years, 73.9% of patients were male. 184 (18.4%) patients were diabetic, 230 (23.0%) patients have had a previous myocardial infarction, 6.8% had previous CABG. The primary endpoint of one year target lesion failure will be available at the TCT conference 2015.

CONCLUSIONS: This is the first multicenter, prospective, non-interventional trial evaluating the long term clinical outcomes of patients treated with a Combo stent.

CATEGORIES: Coronary: Stents: Drug-Eluting

KEYWORDS: Clinical outcomes, Coronary artery disease, EPC, Capturing Dual Therapy COMBO Stent

TCT-64 Incidence, Predictors, and Impact of Post-discharge Bleeding Compared to Myocardial Infarction After Percutaneous Coronary Intervention

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BACKGROUND: The incidence, predictors, and prognostic impact of post-discharge bleeding (PDB) after percutaneous coronary intervention (PCI) with drug-eluting stent (DES) implantation are unclear. This study sought to characterize the determinants and consequences of PDB after PCI.

METHODS: The incidence and predictors of clinically relevant bleeding events occurring within 2 years following hospital discharge were assessed from the prospective Assessment of Dual Antiplatelet Therapy With Drug-Eluting Stents (ADAPT-DES) study.