Conclusions: One in 25 patients underwent surgery in the first year after PCI requiring DAPT interruption, frequently recommended by non-cardiologists and most commonly due to minor surgery.

TCT-502
Efficacy and safety of switching from clopidogrel to prasugrel in diabetic patients with acute coronary syndromes treated with drug-eluting stents: results of the ESCAPADA study
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Background: Prasugrel demonstrated superior efficacy in the reduction of events of acute coronary syndrome (ACS), clopidogrel-naïve, patients treated with percutaneous coronary intervention (PCI), especially in the diabetic (DM) subgroup. The objective of this study is to assess the efficacy and safety of switching from dual antiplatelet treatment with clopidogrel to prasugrel in ACS DM patients being treated with everolimus-eluting stents.

Results: Ninety-six patients were included: 63±8 years mean age, 77% male, 72% hypertensive, 66% hyperlipidemic, 32% smokers (plus 23% ex-smokers), 80% ACS with positive biomarkers, 58% multivessel disease. Only 16% of patients received insulin. 15% of patients were diagnosed with diabetes and 21% with increased risk for DM in the index admission. 10% of patients were previously treated with prasugrel and 5% were changed back to clopidogrel by their treating physicians. Before the PCI, 71 patients (74%) showed HTPR (67% met the VerifyNow criteria, 37% according to Multiplate results). At 1 month only 14% of patients showed HTPR, 3 of the 4 patients on clopidogrel treatment (75%) still showed HTPR. After 1 month follow-up only 5 bleeding events were recorded: one caused by coronary perforation after PCI, one significant groin hematoma, 3 minor bleedings (epistaxis, skin hematomas), without need of subsequent changes in treatment.

Conclusions: Switching from clopidogrel to prasugrel after stent treatment in ACS diabetic patients is associated with a significant reduction in platelet reactivity without a relevant increase in bleeding complications.

TCT-503
Prevalence of CYP2C19 Variants and Associated Stent Thrombosis in Patients Undergoing Percutaneous Coronary Intervention
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Background: CYP2C19 gene polymorphisms affect clopidogrel metabolism resulting in variability in response. We sought to assess the frequency of CYP2C19 variants and association of stent thrombosis (ST) in a series of individuals undergoing percutaneous coronary intervention (PCI).

Methods: A case-control study of 10 patients with stent thrombosis and 38 patients were routinely tested for CYP2C19 gene variants using the Verigene (Nanosphere Inc, Illinois) and iPLEX assays (Sequenom Inc, San Diego). Patients were genotyped for three single-nucleotide polymorphisms of the CYP2C19 alleles (*2, *3, *17).

Results: Of 48 patients undergoing gene testing 31(65%), 95%CI:49%, 78% carried a loss-of-function (LOF) CYP2C19 allele. Call rate and concordance was 100% between the two assays. PCI was performed for acute coronary syndrome in 73% of patients. In patients with a variant allele, 17(35%) were *2, 11 (35%) were *17, and 3(10%) were both *2 and *17. No patient had the CYP2C19*3 variant. LOF alleles were present in 80% of patients with ST compared to 61% in patients without ST (OR=2.6, 95%CI: 0.5,14). Five patients with a LOF allele, had either a clopidogrel dose increase or were changed to prasugrel, with no in-stent thrombosis in these patients.

Conclusions: Carriage of a LOF CYP2C19 allele is associated with a higher odds ratio of in-stent thrombosis in patients on standard dose clopidogrel, highlighting the need for routine gene testing. Patients with a LOF allele should have alteration of P2Y12 inhibitor therapy with either a higher dose of clopidogrel or a switch to prasugrel or ticagrelor.
Conclusions: Prasugrel was associated with an increased risk of total bleeding; however it was not significantly associated with major or life threatening bleeding events. Ticagrelor was not significantly associated with any kind of bleeding compared to clopidogrel.

TCT-505
Optimal Dual Platelet Therapy Duration after Lower Extremity Peripheral Artery Intervention
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Background: Although dual platelet therapy (DAPT) is commonly prescribed after lower extremity peripheral artery interventions, its optimal duration has not yet been established.

Methods: We analyzed 494 limb interventions from 367 patients between July 2005 and May 2014 enrolled in the multicenter Excellence in Peripheral Artery Disease (XLPAD) registry (NCT01904851) for the primary endpoint (death, myocardial infarction, coronary or limb revascularization, unplanned amputation and surgical revascularization) over a 12 month period based on the duration of prescribed or received DAPT.

Results: DAPT was prescribed following 92.3% procedures, with 228 (50%) each in ≤3 months and >3 months duration. After adjusting for ankle brachial index, Rutherford category, and cardiovascular risk factors, primary endpoint free survival was similar between prescription groups (hazard ratio [HR]: 0.99, 95% confidence interval [CI]: 0.55-1.78; p=0.998). 50.9% actually received ≤3 months DAPT while 49.1% received >3 months, with no differences in primary endpoint free survival (HR: 1.16, 95% CI: 0.69-1.95; p=0.567). Importantly, >3 DAPT duration was more often prescribed to patients with prior coronary artery disease (p<0.001, Figure 1).

Conclusions: Experience across operators suggests equipoise in the selection of DAPT duration after peripheral artery intervention, with longer prescription duration selected for patients with preexisting coronary artery disease.

TCT-506
Comparison Of Ticagrelor and Prasugrel In STEMI-Patients: 30-Day Mortality After Primary PCI
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Background: Recent trials indicate that both Ticagrelor and Prasugrel are superior to Clopidogrel in preventing cardiovascular events. However, as to date, no trials have been conducted comparing these drugs directly. We compared survival in patients with STEMI receiving Ticagrelor or Prasugrel.

Methods: This retrospective study included 1069 consecutive STEMI-patients in the Catharina Hospital, Eindhoven area, The Netherlands. From April 2012 until April 2013, patients received Prasugrel loading (60mg) and maintenance dose (patients older than 75 years or weighing less than 60 kg were given Clopidogrel). From April 2013 onward, they received Ticagrelor loading (180mg) and maintenance dose. Death was defined as death from any cause within 30 days after primary PCI. Binary logistic regression was used for comparison of anti-platelet strategies.

Results: No patients were lost to follow-up. In the Ticagrelor group 28 out of 524 patients (5.3%) died within 30 days after PCI, as compared to 21 out of 545 patients (3.9%) in the ‘Prasugrel/Clopidogrel’ group (OR, 1.495% CI 0.79 to 2.5; p=0.2).

Conclusions: We found no significant difference in 30-day mortality in STEMI-patients treated with Ticagrelor or Prasugrel in a large, retrospective, single-centre study.

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TCT-507
RENAL ARTERY ANEURYSMS. FIRST HUMAN TREATMENT WITH THE MULTILAYER FLOW MODULATOR
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Background: Renal Artery Aneurysms (RAAs) can be surgically treated but due to high risk, endovascular procedures have been proposed (coils, graft...). All these techniques have some drawbacks, potential complications and contraindications. We propose a new technique: the Multilayer Flow Modulator (MFM®), a self expandable.

Methods: This MFM® is a 3D braided tube made of several interconnected layers without any covering. Our earliest tests, in vitro (theoretical simulation computerized Fluid dynamics, Molecular Modelization) & in vivo. demonstrate that this MFM® reduces the velocity in the aneurismatic sac up to 90% by modifying the hemodynamic conditions.. A saccular aneurysm (A.) without collateral branch will thrombose quickly. If a collateral branch is present the flow is directed towards this branch leading to shrinkage of the aneurysm. In fusiform A. the flow is laminated, the vortexes eliminated, eliminating the risk of rupture. Animal experiments show excellent results. Moreover, as demonstrated in animal and human studies this MFM preserves the collateral branches and increases the flow in them, allowing the possibility to cover any artery without compromising the flow.

Results: 8 RAAs (right:5, left: 3) in 8 pts (male: 3) mean age 58 y. treated with MFM®: 6 pts had atheromatous disease, 2 a fibromuscular dysplasia. One pt had a solitary kidney. All these pts had hypertension. 10 MFM®(e: 5 to 6 mm, length 30 to 60 mm) loaded in a 6 Fl sheath implanted by femoral approach through 8 F guiding catheter. These stents covered major renal branches without compromising the flow. Technical success: 100%. No complications. Immediately: important reduction of the velocities inside the aneurismatic sac. 6 to 36 month follow up will be presented. All aneurysms thrombosed with diameter reduction in some pts. The thrombosis could take several weeks depending on the importance of collateral branches. All the side branches remain patent.