the primary end-point was in-hospital mortality. Fisher's Exact Test was used to examine relationships. Inferences were made at the 0.05 level of significance. Ventricular assist device (VAD) is defined as the use of either IABP or Impella 2.5 device before, during, or following PCI.

RESULTS The eighty-nine patients with LM PCI were divided into those with ventricular support (n=39) and without ventricular support (n=50). The former group was further divided into those with support from either Impella 2.5 (n=28) or intra-aortic balloon pump [IABP] (n=11).

Age, race, and gender did not differ between patients who received unassisted LM-PCI from those with ventricular support (P= 0.142, 1.0, and 0.776 respectively). The angiographic stenosis of atherosclerotic lesions in LM, proximal LAD, other native coronary vessels, vein grafts and bypasses were similar between the groups. Duration of hospitalization was significantly longer for patients with VAD support compared to those without VAD (7.19±6.89 vs. 2.78±3.39, p<0.001). The incidence of cardiogenic shock and in-hospital mortality was significantly higher in the VAD group (p=0.009 and 0.001 respectively).

Overall, in-hospital mortality was 9% (8 of 89). The IABP and Impella 2.5 groups had mortality proportions of 46% (5 of 11) and 11% (3 of 28), respectively; p = 0.028. For all patients, in-hospital mortality was higher for those with versus without cardiogenic shock (56% or 5 of 9 vs. 4% or 3 of 80; p < 0.001), and for those with versus without LVEF 40 (17% or 7 of 42 vs. 2% or 1 of 46; p < 0.025).

CONCLUSION In a select group of patients with LM disease, unsupported PCI appears to be a feasible and safe procedure. In high-risk patients, the utilization of Impella 2.5 appears to be superior to IABP in LM PCI resulting in a favorable short-term mortality outcome.

CRT-200.58

Acute MI With and Without Hemodynamic Support: A Network Meta-Analysis and Systematic Review

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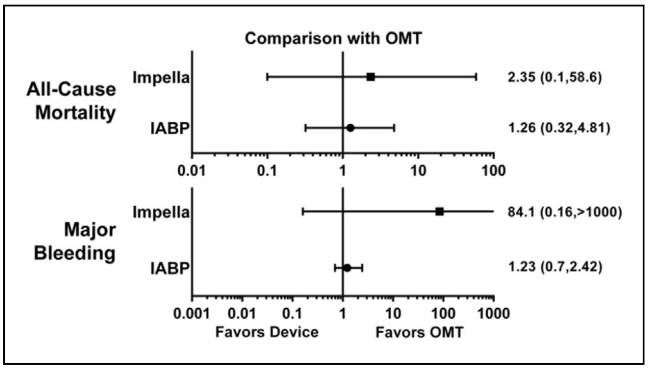
BACKGROUND The intra-aortic balloon pump (IABP) and Impella may be used for hemodynamic support during percutaneous coronary interventions (PCI). However, controversy exists regarding its use in patients with acute myocardial infarction (MI). We performed a network meta-analysis of studies in patients with acute MI to compare clinical outcomes with IABP, Impella, and optimal medical therapy (OMT).

METHODS MEDLINE/PubMed, Cochrane CENTRAL, and ClinicalTrials.gov were searched for studies assessing Impella and IABP in patients with AMI with or without cardiogenic shock. Network meta-analysis with a Bayesian framework was performed to directly and indirectly compare clinical outcomes at 30 days or closest available. Odds ratios with 95% confidence intervals (OR [95% CIs]) were generated with random-effects models to compare outcomes.

RESULTS Our analysis included 7 RCTs with 1838 patients who were randomized to IABP (n=908), Impella (n=24), or OMT (n=906), and 2 non-RCTs with 13,539 patients who received IABP (n=956) or OMT (n=12,583). The mean age was 67.4+/-12 years, 78.6% were male, 72.1% had hypertension, 39.1% had diabetes mellitus, and 24.0% had a prior MI. There was no significant difference in all-cause mortality, stroke, or vascular complications. There was a trend towards higher mortality with both IABP and Impella (Figure). Major bleeding was also higher with IABP and Impella although this was not significant (Figure). However, when compared to IABP, Impella trended toward higher major bleeding as well (OR 65.6 [0.14,>1000]).

CONCLUSION There is no apparent benefit for the routine use of either device against OMT for patients presenting with AMI. The number of patients included for Impella is very limited, and further studies are needed to elucidate the outcomes, benefits and risks of these devices during PCI for acute MI.



CRT-200.59

The Fribourg Synergy Experience: One-year Outcomes With the Bioabsorbable Polymer-coated Thin Strut Everolimus-eluting Synergy Stent for Coronary Revascularization in All-comers

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BACKGROUND New-generation thin strut bioabsorbable polymer drug-eluting stents (DES) have shown promising mid-term results in clinical trials and real-world registries. We sought to assess 1-year efficacy and safety outcomes in all-comer patients treated with the SYNERGY stent at our institution.

METHODS All consecutive patients treated with the SYNERGY stent at University and Hospital Fribourg between January 2013 and March 2015 were prospectively included in the Fribourg SYNERGY registry. Clinical follow-up was performed at 1 year. Intermediate safety monitoring was performed in September 2015 in all patients and assessed the occurrence of stent thrombosis (ST). Overall lesion complexity was assessed by the SYNTAX Score. The primary endpoint was the Academic Research Consortium (ARC) defined device-oriented composite of cardiac death, myocardial infarction of the target vessel and clinically indicated target lesion revascularization at 1 year.

RESULTS A total of 425 patients were enrolled in the registry. Mean age was 66±11 years and 73% (n=309) of treated patients were men. Diabetes was found in 23% (n=98) of patients. The clinical presentation at index procedure was acute coronary syndrome in 63% (n=267) of cases. Mean SYNTAX score was 15±9. Chronic total occlusions were treated in 6% (n=27) and left main coronary arteries in 3% (n=11) of patients. One-year follow-up was available in the first 264 patients. The primary endpoint occurred in 4.2% (n=11) of patients. Cardiac death occurred in 1.9% (n=5) of patients. The rate of target vessel MI was 1.5% (n=4). All target lesion revascularizations were clinically indicated and occurred in 2.7% (n=7) of cases.

Overall, definite stent thrombosis according to ARC criteria had occurred in 4 patients (0.9%) at the time of intermediate safety assessment (mean follow-up: 329±201 days). The rate of early and late ST were 0.7% (n=3) and 0.2% (n=1), respectively.

CONCLUSION This single center experience confirms the excellent safety and efficacy profile of the bioabsorbable polymer-coated thin strut everolimus-eluting SYNERGY stent in daily clinical practice.

CRT-200.60

Multi-analysis With Oct and Vasomotion in Everolimus-eluting Synergy Coronary Stents - The Moves Trial

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BACKGROUND To compare endothelium-dependent and -independent vasomotor function and vascular healing 15 months after implantation of 2 new-generation drug eluting stents and biovascular scaffolds (BVS).

METHOD A total of 28 patients previously treated with a SYNERGY stent (BP-EES), a PROMUS stent (PP-EES) or an ABSORB (BVS) underwent control coronary angiograph, 15 months after implantation, coupled with optical coherence tomography (OCT) imaging and supine bicycle exercise during 2 minutes at 50 and 100 Watts. Intracoronary nitroglycerin was administered after exercise testing. Coronary vasomotor response was assessed using quantitative coronary angiography at rest, during supine bicycle exercise and after nitroglycerin. The primary endpoint was the percent change in mean lumen diameter of the stented segment compared to baseline. Secondary endpoints were strut coverage and apposition as assessed by OCT imaging.

RESULTS There were no significant differences in vasomotor response between the 3 treatment groups. Patients with PP-EES showed significant vasoconstriction of the proximal peristent segment at maximum exercise (p=0.02). BVS- and BP-EES treated patients did not show significant vasoconstriction at maximum exercise. BP-EES (4%) and BVS (3%) showed less uncovered struts than PP-EES (14%, p=0.03 and 0.08 respectively).

CONCLUSION BVS and thin strut BP-EES have a reassuring vasomotion profile suggesting minimal endothelial dysfunction 15 months after implantation.

CRT-200.61

Temporal Changes in Kidney Injury Rates Following Percutaneous Coronary Interventions. Data From A Single Center Registry Between 2000-2014

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BACKGROUND Acute kidney injury (AKI) is a frequent complication following percutaneous coronary intervention (PCI). The current definitions limit its occurrence to 48-hour following the procedure which may cause underestimation of the real-life incidence of kidney injury following PCI.

METHODS We analyze the data of a large single center registry of patients undergoing PCI between the years 2000-2014. We report on the AKI rates, correlates and trends using a wider definition for AKI without a strict temporal limitation.

RESULTS The study included 22,306 patients with a mean age (±SD) of 64.84±12.33 of whom 66% were males and 19% presented with ST segment elevation myocardial infarction(STEMI). AKI of any grade occurred in10.6%, dialysis was needed in 28 patients. In multivariate analysis, age, race, eGFR, diabetes mellitus, congestive heart failure, extent of myocardial injury, as well as post procedural bleeding and vascular complications were all found to correlate with AKI. Contrast volume was forced in the analysis, however was not found significant. Patients with AKI were more likely to have longer in hospital and intensive care unit stays, and higher rates of major adverse cardiovascular outcomes and death. In trend analysis between the years 2000-2014, we did not find a linear reduction of AKI rates (p for trend=0.718). This was mainly due to an unpredicted surge in AKI events from baseline, occurring in 2011 with AKI rates of 20% (p for trend=0.04) followed thereafter by stricter adherence to current guidelines and implementation of anti AKI measures which significantly reduced the AKI rates to similar rates as before at about 6% (p=0.05).

CONCLUSION AKI rates in a real life setting change during a prolonged period of time. Physician awareness and implementation of anti AKI measures may help to reduce peaks to nadirs.

CRT-200.62

The Impact of Ticagrelor on Platelet Reactivity in African Americans: Interim Results of the ACS Ethnicity Study

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BACKGROUND Little is known regarding the ability of ticagrelor to inhibit platelet reactivity in African Americans (AA) with acute coronary syndrome (ACS). Thus, we performed pharmacodynamic studies of platelet reactivity following treatment with ticagrelor in AA with ACS.

METHODS We prospectively enrolled AA with ACS who did not have contraindication to ticagrelor. Blood samples were collected 1, 4, and 8 hours following loading with ticagrelor and again at 30 days. Platelet reactivity was assessed with maximal platelet aggregation (MPA) to 20 or 5 μM adenosine diphosphate (ADP) on light transmission aggregometry, VerifyNow P2Y12 reaction units (PRU), and platelet reactivity index vasodilator-stimulated phosphoprotein phosphorylation (PRI-VASP).

RESULTS We enrolled 24 AA patients with a mean age of 67±13 and 54% were men. Twenty-one were admitted for NSTEMI, 1 for STEMI, 2 patients for UA, and 58% of patients received clopidogrel before ticagrelor. Platelet reactivity was significantly inhibited after loading with ticagrelor and remained inhibited on maintenance therapy (Figure). Platelet inhibition was significantly greater at 4 and 8 hours compared with 1 hour for all tests (p<0.05). Importantly, patients that received clopidogrel prior to ticagrelor had significantly greater platelet inhibition at 1 hour than patients who did not receive clopidogrel (PRU 201±72 vs 70±69, p<0.001; PRI 63±19 vs 14±24, p<0.001). However, there was no difference in PRU values by 4 hours (PRU 33±44 vs 31±33). The degree of platelet inhibition following loading with ticagrelor and on maintenance therapy appears comparable to that seen in Caucasian patients enrolled in the PLATO trial.

CONCLUSION Ticagrelor significantly inhibits platelet reactivity measured by LTA, VerifyNow PRU, and VASP in AA with ACS.

	1 Hour	4 Hours	8 Hours	30 Days
MPA (%) to 20 μM ADP	26±21	9±8	8±8	17±11
MPA (%) to 5 μM ADP	17±16	3±4	4±5	8±7
VerifyNow PRU	121±94	32±38	26±30	37±40
PRI-VASP	33±32	10±9	11±10	13±12

CRT-200.63

Robotic Percutaneous Coronary Intervention in Patients With Acute Myocardial Infarction: Initial Clinical Experience and Procedural Outcomes

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BACKGROUND A robotic system for performing remote-controlled angioplasty and stent placement is now in clinical use in the US. This robotic system allows the operator to perform percutaneous coronary intervention (PCI) while seated in a lead-lined cockpit, thereby minimizing radiation exposure and eliminating the need for lead apparel. The initial clinical study describing robotic-PCI excluded patients with coronary thrombosis, and thus the role of robotic-PCI in myocardial infarction remains largely unknown. This study describes the initial clinical experience and procedural success rates in a small cohort of patients with acute myocardial infarction undergoing robotic-PCI.

METHODS Data were collected from consecutive robotic-PCI cases performed at a single center in patients with acute myocardial infarction. Target coronary lesions were classified angiographically according to the ACC/AHA lesion classification system. The primary measure of interest was procedural success, defined as <30% residual stenosis after PCI in the absence of associated death or repeat revascularization prior to hospital discharge. Procedural duration, defined as the time from sheath insertion to removal of the guide catheter, was recorded for all cases.

RESULTS During the study period, robotic-PCI was performed in 17 patients (age 59 ± 10; 71% male) with acute myocardial infarction. In all cases radial arterial access was used for performance of robotic-PCI. Baseline angiographic lesion complexities were Type A in 11.8% cases, Type B1 in 11.8%, Type B2 in 52.9%, and Type C in 17.6%. In 10 (58.8%) cases, an angiographic filling defect consistent with thrombus was present at the culprit lesion site prior to PCI. Robotic-PCI resulted in