BACKGROUND Cangrelor, an intravenous, rapidly acting P2Y12 inhibitor, is superior to clopidogrel in reducing ischemic events in PCI patients with stable ischemic heart disease and acute coronary syndromes. We examined the safety and efficacy of cangrelor in relation to the extent of coronary artery disease.

METHODS We studied a prespecified modified intention to treat population of patients with single vessel and multivessel coronary disease. The primary efficacy outcome was the composite of death, myocardial infarction (MI), ischemia-driven revascularization (IDR), and stent thrombosis (ST) at 48 hours. Kaplan Meier analysis of the primary outcome was performed through 30 days. The safety outcome was non-CABG GUSTO severe bleeding at 48 hours.

RESULTS Among 10,921 patients, 5,296 (48%) had single vessel disease (SVD) and 5,625 (52%) had multivessel disease (MVD). Patients with MVD were older (65 vs. 63 years), less often female (25% vs. 31%), and more often had diabetes (31% vs. 25%), hypertension (82% vs. 77%), and prior MI (25% vs. 16%). At 48 hours, MVD patients had higher rates of death/MI/IDR/ST (6.3% v 4.2%, p = 0.001), but not GUSTO severe bleeding (0.1% vs. 0.2%, p = 0.72) compared with SVD patients. Consistent with outcomes in the overall population, cangrelor resulted in fewer death/MI/IDR/ST events compared with clopidogrel in patients with SVD (3.9% v 4.5%; OR 0.88, 95% CI 0.67-1.15) and with MVD (5.4% v 7.3%; OR 0.73, 95% CI 0.59-0.91). Table 1. Summary of major clinical outcomes. The present study indicates that 6 months of DAPT might be insufficient in patients after PCI (even with novel BP-SES) for clindogrel in either SVD or MVD patients (SVD: OR 3.04; 95% CI 0.61-15.06; MVD: OR 0.74; 95% CI 0.17-3.32; p-interaction 0.20).

CONCLUSIONS Patients with MVD compared to SVD had higher risk of ischemic complications after PCI but not severe bleeding. Cangrelor reduced ischemic complications compared with clopidogrel with consistent reductions in higher risk MVD patients and lower risk SVD patients with no significant increase in severe bleeding.

CATEGORIES CORONARY: PCI Outcomes

TCT-76 Six Versus Twelve Months of Dual Antiplatelet Therapy After Percutaneous Coronary Intervention With Biodegradable Polymer Sirolimus-Eluting Stents for Bifurcation Lesions: Insights From the I-LOVE-IT 2 Trial
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BACKGROUND Optimal duration of dual antiplatelet therapy (DAPT) after percutaneous coronary intervention (PCI) for complex coronary lesions and patients is still controversial. There is no randomized study investigating shorter (6 months) vs. standard (12 months) duration of DAPT after PCI for bifurcation lesions. We sought to report the 18-month results of the bifurcation substudy from the I-LOVE-IT 2 trial, which compared safety and efficacy between patients receiving 6- vs. 12-month DAPT after implantation of a novel biodegradable polymer sirolimus-eluting stent (BP-SES).

METHODS In the prospective randomized I-LOVE-IT 2 trial, 1829 patients who were allocated to the BP-SES group were also randomized to receive either 6-month (n = 909) or 12-month DAPT (n = 920) pre-stenting; among them there were 717 patients (349 in 6-month DAPT group and 368 in 12-month DAPT group, respectively) with bifurcation lesions. The major endpoints were target lesion failure (TLF, a composite of cardiac death, target vessel myocardial infarction [TV-MI], or clinically indicated target lesion revascularization [CI-TLR]) and net adverse clinical and cerebral events (NACCE, a composite of all-cause death, all MI, stroke, or major bleeding [Bleeding Academic Research Consortium ≥ type 3]) at 18 months. Landmark analyses at 6 months were used to derive event rates between 6 and 18 months of follow-up.

RESULTS The demographic, lesion or procedural characteristics were similar between groups. Eighteen-month TLF rate was numerically higher in the 6-month DAPT group compared to the 12-month DAPT group (9.3% vs. 5.5%, p = 0.05), which was mainly driven by an increased CI-TLR between 6 and 18 months (3.5% vs. 1.1%, p = 0.03) in the 6-month DAPT group when patients have discontinued DAPT. There were no significant differences in NACCE, death, MI, stroke, and stent thrombosis (ST) at 18 months or between 6 and 18 months period of follow-up. However, there was a non-significant tendency of lower all bleeding events in favoring 6-month DAPT strategy according to the landmark analysis (1.2% vs. 3.3%, p = 0.056). Major clinical outcomes were shown in table. Table 1. Major Clinical Outcomes.

CONCLUSIONS The present study indicates that 6 months of DAPT might be insufficient in patients after PCI (even with novel BP-SES) for clindogrel in either SVD or MVD patients (SVD: OR 3.04; 95% CI 0.61-15.06; MVD: OR 0.74; 95% CI 0.17-3.32; p-interaction 0.20).

CATEGORIES CORONARY: PCI Outcomes

TCT-75 Cangrelor Improves Ischemic Outcomes in Patients With Multivessel Disease And Single Vessel Disease Undergoing PCI: Insights From The CHAMPION PHOENIX Trial

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BACKGROUND Cangrelor, an intravenous, rapidly acting P2Y12 inhibitor, is superior to clopidogrel in reducing ischemic events in PCI patients with stable ischemic heart disease and acute coronary syndromes. We examined the safety and efficacy of cangrelor in relation to the extent of coronary artery disease.

METHODS We studied a prespecified modified intention to treat population of patients with single vessel and multivessel coronary disease. The primary efficacy outcome was the composite of death, myocardial infarction (MI), ischemia-driven revascularization (IDR), and stent thrombosis (ST) at 48 hours. Kaplan Meier analysis of the primary outcome was performed through 30 days. The safety outcome was non-CABG GUSTO severe bleeding at 48 hours.

RESULTS Among 10,921 patients, 5,296 (48%) had single vessel disease (SVD) and 5,625 (52%) had multivessel disease (MVD). Patients with MVD were older (65 vs. 63 years), less often female (25% vs. 31%), and more often had diabetes (31% vs. 25%), hypertension (82% vs. 77%), and prior MI (25% vs. 16%). At 48 hours, MVD patients had higher rates of death/MI/IDR/ST (6.3% v 4.2%, p = 0.001), but not GUSTO severe bleeding (0.1% vs. 0.2%, p = 0.72) compared with SVD patients. Consistent with outcomes in the overall population, cangrelor resulted in fewer death/MI/IDR/ST events compared with clopidogrel in patients with SVD (3.9% v 4.5%; OR 0.88, 95% CI 0.67-1.15) and with MVD (5.4% v 7.3%; OR 0.73, 95% CI 0.59-0.91). Table 1. Summary of major clinical outcomes. The present study indicates that 6 months of DAPT might be insufficient in patients after PCI (even with novel BP-SES) for clindogrel in either SVD or MVD patients (SVD: OR 3.04; 95% CI 0.61-15.06; MVD: OR 0.74; 95% CI 0.17-3.32; p-interaction 0.20).

CONCLUSIONS Patients with MVD compared to SVD had higher risk of ischemic complications after PCI but not severe bleeding. Cangrelor reduced ischemic complications compared with clopidogrel with consistent reductions in higher risk MVD patients and lower risk SVD patients with no significant increase in severe bleeding.
bifurcation lesions due to an increased late clinical restenosis, thus future DAPT study focusing on personalized medicine is warranted. (ClinicalTrials.gov Identifier: NCT01681381)

**KEYWORDS** Bifurcation lesion, Biodegradable polymer, Dual antiplatelet therapy

**TCT-77** Risk and benefits of triple therapy in patients undergoing percutaneous coronary stent implantation requiring chronic oral anticoagulation: a meta-analysis of 12 trials

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**BACKGROUND** Patients with coronary artery disease who undergo stent implantation and have concomitant indication for long term oral anticoagulation represent a considerable percentage of the overall population. To date there is still no consensus about the optimal antithrombotic strategy to choose in this kind of patients, due to the difficult balance between an increased risk of bleeding and thromboembolic complications. Aim of this meta-analysis was to evaluate risk and benefits of triple antithrombotic therapy versus dual antiplatelet therapy in patients undergoing coronary stent implantation, requiring long term oral anticoagulation.

**METHODS** We performed formal searches of PubMed, EMBASE, Cochrane, and other registers of controlled trials and major international scientific session abstracts from January 1990 to September 2014 regarding the use of triple antithrombotic therapy versus dual antithrombotic therapy in patients undergoing percutaneous coronary stent implantation that required chronic oral anticoagulation. Data regarding study design, inclusion/exclusion criteria, number of patients, and selected endpoints was extracted by 2 investigators. Disagreements were resolved by consensus.

**RESULTS** Twelve trials, with a total of 7838 patients undergoing stent implantation with indication to long term oral anticoagulation were finally included. A total of 2586 patients were treated with triple therapy whereas 5252 patients received dual antithrombotic therapy alone. The follow-up period ranged from 270 to 2000 days. Mortality occurred in 10.8% of patients receiving triple therapy versus 16.7% of patients in dual therapy (OR [95% CI] = 0.80 [0.69-0.94], p = 0.005; phet = 0.0003). By meta-regression analysis no relationship was observed between reduction in mortality and the risk of bleedings (p = 0.10). Data regarding secondary endpoints showed a significant association between triple therapy and an increased risk of bleedings (12.3% versus 9.9%) (OR [95% CI] = 1.37 [1.16-1.62], p = 0.0002; phet = 0.20), while we did not find any significant difference in terms of recurrent myocardial infarction (p = 0.39), stent thrombosis (p = 0.46) or stroke (p = 0.15).

**CONCLUSIONS** This meta-analysis showed that among patients undergoing coronary stent implantation, requiring chronic oral anticoagulation, the use of a triple antithrombotic therapy is associated with a significant reduction in mortality that largely outweighed the higher risk of major bleeding complications associated with triple therapy.

**CATEGORIES CORONARY:** Pharmacology/Pharmacotherapy

**KEYWORDS** Anticoagulation, Antiplatelet therapy

**TCT-78** Efficacy of Long-Term Ticagrelor in Stented Patients in PEGASUS-TIMI 54

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**BACKGROUND** Ticagrelor in patients with prior MI reduced the incidence of CV death, MI, or stroke by 15-16% in PEGASUS-TIMI 54. We investigated the efficacy of ticagrelor in patients based on the presence and type of stent.

**METHODS** Details of each patient’s most recent PCI were collected at randomization. Stent thrombosis (ST) was prospectively adjudicated according to ARC definitions with angiographic confirmation when available.

**RESULTS** In PEGASUS-TIMI 54, 4271 patients had no history of stenting (20%), 8597 had a bare metal stent (BMS, 41%), and 8294 had a drug-eluting stent (DES, 39%). The median time from PCI to randomization was 1.7 yrs (IQR 1.2-2.3; 95% >1 year from PCI). Of the patients with DES, 52% had received either everolimus or zotarolimus-eluting stents (ZES or EES), 27% had received sirolimus-eluting stents (SES or ZES), and stent type was not specified in the remainder. Among patients with stents randomized to placebo, over a median of 33 months of follow-up, recurrent MI was most frequent ischemic event (5.2%), followed by CV death (2.3%) and stroke (1.7%), whereas ARC definite ST was rare (0.7%). Ticagrelor consistently reduced CV death, MI, or stroke regardless of stent type (pooled ticagrelor vs placebo; Fig Left) with similar magnitude of benefit for each dose and for each of the components. Rates of definite ST were 0.38% with BMS, 1.01% with SES or ZES, and 0.65% with EES or ZES. Ticagrelor 90 mg bid significantly reduced ST whereas there was a trend with ticagrelor 60 mg bid (Fig Right). The effect was even more pronounced for both doses when patients were on study drug: HR 0.30 (0.14-0.65) & HR 0.66 (0.37-1.17), respectively.

**CONCLUSIONS** Patients with a history of MI more than 1 year from PCI remain at heightened risk for ischemic events, predominantly MI, CV death, and stroke, with stent thrombosis being rare. Long-term ticagrelor reduces CVD/MI/Stroke regardless of stenting history and reduces stent thrombosis in patients with stents.

**CATEGORIES CORONARY:** PCI Outcomes

**KEYWORDS** Antiplatelet therapy

**TCT-79** Efficacy of Cangrelor in Lesions with High-Risk and Low-Risk Angiographic Characteristics: The CHAMPION PHOENIX trial

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**BACKGROUND** In the CHAMPION PHOENIX trial, the potent, rapidly acting, intravenous ADP antagonist cangrelor reduced the 48-hour incidence of major adverse cardiac events (MACE; death, MI, stent thrombosis, or repeat ischemia-driven revascularization) compared to standard dose of clopidogrel across a spectrum of patients. Whether this is true in patients with simple and complex coronary anatomy is unknown.