the per-protocol minimum duration of DAPT after the procedure, and longer DAPT (L-DAPT) defined as the per-protocol period of prolonged DAPT beyond S-DAPT. The primary outcome was the study-defined major adverse cardiac events (MACE). Random effect models were used as primary analytic approach with generic inverse variance using effect estimates and standard errors extracted from each RCT’s gender subgroup analysis. Heterogeneity was assessed with I² test (with I² > 75% indicating substantial heterogeneity). Analyses were conducted with Cochrane’s Review Manager (RevMan) version 5.3.

RESULTS A total of 13 RCTs with 108,069 patients have been included in the final dataset. Of them, 31,390 (29%) were women and 76,679 (71%) were men. Mean weighted exposure time to DAPT was 2.4 months and 5.9 months in the S-DAPT and L-DAPT groups, respectively. Compared with S-DAPT, L-DAPT was associated with a lower risk of MI (odds ratio [OR]: 0.72; 95% CI: 0.62 – 0.83; p < 0.00001). Conversely, L-DAPT was associated with a higher risk of CSB (OR: 1.59; 95% CI: 1.31 – 1.92; p < 0.00001). The net clinical benefit in the trade-off between ST and CSB across a range of bleeding and ischemic risk scenarios is illustrated in Figure 1. With L-DAPT, the benefit on MI outweighed the risk for bleeding with a ST risk > 6% and a CSB risk ≤ 3%.

CONCLUSIONS Our results suggest that the benefits of longer DAPT durations may be optimal in patients at high thrombotic or low bleeding risk, findings that warrant prospective evaluation.

CONCLUSIONS According to the results of the present study-level metaanalysis, the benefits of DAPT appear to be less in women as compared to men, a finding that warrants prospective confirmation.

CATEGORIES CORONARY: Pharmacology/Pharmacotherapy
KEYWORDS Coronary artery disease, Dual antiplatelet therapy, Women

TCT-218
Balancing The Risk Between Myocardial Infarction and Clinically Significant Bleeding With Dual Antipeptide Therapy Following Drug-Eluting Stent Implantation
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BACKGROUND Longer DAPT (> 12 months) after drug-eluting stent (DES) implantation is associated with a lower risk of myocardial infarction (MI) counterbalanced by a higher risk of major bleeding events. We sought to simulate the therapeutic risks and benefits of longer versus short DAPT durations after PCI using evidence from randomized controlled trials (RCT).

METHODS Using frequentist meta-analytic techniques, we calculated summary effect estimates for both MI and clinically significant bleeding (CSB) associated with longer (L-DAPT) versus shorter (S-DAPT) DAPT durations based on results of 10 RCT (n = 32,133). We then calculated the number needed to treat (NNT) and number needed to harm (NNH) as a function of baseline thrombotic and bleeding risk. NNT/NNH ratios > 1 were considered as evidence of therapeutic harm while ratios < 1 were classified as beneficial.

RESULTS The mean weighted follow-up time among all trials was 19.6 months. Mean weighted exposure time to DAPT was 23.2 months and 8.5 months in L-DAPT and S-DAPT groups respectively. As compared to S-DAPT, L-DAPT was associated with a lower risk of MI (odds ratio [OR]: 0.72; 95% CI: 0.62 – 0.83; p < 0.00001). Conversely, L-DAPT was associated with a higher risk of CSB (OR: 1.59; 95% CI: 1.31 – 1.92; p < 0.00001). The net clinical benefit in the trade-off between ST and CSB across a range of bleeding and ischemic risk scenarios is illustrated in Figure 1. With L-DAPT, the benefit on MI outweighed the risk for bleeding with a ST risk > 6% and a CSB risk ≤ 3%.

CONCLUSIONS Our results suggest that the benefits of longer DAPT durations may be optimal in patients at high thrombotic or low bleeding risk, findings that warrant prospective evaluation.

CATEGORIES CORONARY: Pharmacology/Pharmacotherapy
KEYWORDS Bleeding, Dual antiplatelet therapy, Thrombosis

TCT-219
Impact of prasugrel versus clopidogrel in ACS patients undergoing PCI with short or long stents: Results from the PROMETHEUS Study
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BACKGROUND Randomized data have shown that prasugrel is superior to clopidogrel in reducing ischemic risk including unplanned revascularization, albeit with increased bleeding. Greater stent length is also an independent correlate of adverse events after percutaneous coronary intervention (PCI). We sought to determine whether
Prasugrel influences ischemic benefit in real world acute coronary syndrome (ACS) patients irrespective of stent length.

**METHODS**

PROMETHEUS was a retrospective multicenter observational study comparing clopidogrel and prasugrel use in patients undergoing PCI for acute coronary syndrome. MACE was defined as a composite of death, myocardial infarction, stroke and unplanned revascularization at one year. We compared outcomes between clopidogrel and prasugrel treatment stratified by stent length < 3.0 mm in diameter. The overall crude MACE rate for the study population was 12.1% vs 20.7% with prasugrel compared with clopidogrel, p<0.001. In the short-stent group prasugrel was associated with a significantly lower risk for MACE prior to adjustment (10.7% vs. 18.6%, p<0.001). Analogous event rates in the long-stent group were 15.8% and 26.7%, respectively (p<0.001). Results remained significant for short but not long stents after adjustment without evidence of interaction (p=0.98).

**CONCLUSIONS**

Compared with clopidogrel, prasugrel use afforded ischemic benefit irrespective of stent length in real-world ACS patients undergoing PCI.

**BACKGROUND**

Despite pharmacological advantages, prasugrel may be preferentially used in patients with higher body mass index (BMI) in the real-world due to concerns regarding bleeding. We sought to examine the frequency of prasugrel use in patients with lower (<30) and higher (≥30) BMI, and to compare the MACE rate in these subgroups for patients treated with prasugrel versus clopidogrel.

**METHODS**

PROMETHEUS was a retrospective multicenter observational study comparing clopidogrel and prasugrel use in patients undergoing PCI for acute coronary syndrome. MACE was defined as a composite of death, myocardial infarction, stroke and unplanned revascularization at one year. We compared outcomes between clopidogrel and prasugrel treatment stratified by BMI.

**RESULTS**

Prasugrel was given to 20.0% and 22.0% of patients receiving short (n=14790) and long stents (n=4695) respectively. Compared with clopidogrel treated patients, those receiving prasugrel were younger, more often male, with lower frequencies of diabetes, prior PCI, renal dysfunction and anemia but higher left ventricular ejection fraction. The incidence of STEMI presentation, B2/C type lesions, single vessel and non-significantly calcified disease was higher in prasugrel treated patients with a greater likelihood to receive drug eluting stents and stents >2.5 mm in diameter. The overall crude MACE rate for the study population was 12.1% vs 20.7% with prasugrel compared with clopidogrel, p<0.001. In the BMI<30 group prasugrel was associated with a significantly lower risk for MACE prior to adjustment (12.7% vs. 21.3%, p<0.001). Analogous event rates in the BMI<30 group were 11.5% and 19.9%, respectively (p<0.001). Results remained significant for BMI<30 but not BMI≥30 without evidence of interaction after adjustment (p=0.98).

**CONCLUSIONS**

In a real world setting, the use of prasugrel was similar in patients with BMI<30 and ≥30. Compared with clopidogrel, prasugrel use afforded ischemic benefit irrespective of BMI in real-world ACS patients undergoing PCI.

**CATEGORIES CORONARY:** Pharmacology/Pharmacotherapy

**KEYWORDS**

Acute coronary syndromes, Angioplasty, Antiplatelet therapy

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**CATEGORIES CORONARY:** Pharmacology/Pharmacotherapy

**KEYWORDS**

Acute coronary syndromes, Antiplatelet therapy, Body Mass Index

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**CATEGORIES CORONARY:** Pharmacology/Pharmacotherapy

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Acute coronary syndromes, Antiplatelet therapy, Body Mass Index

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