Background: Randomized trials have demonstrated the efficacy of prasugrel vs. clopidogrel in patients with acute MI, yet evidence of their effectiveness in real world practice is limited.

Methods: We studied use of prasugrel vs. clopidogrel among 11,417 STEMI and NSTEMI patients treated with PCI in the TRANSLATE-ACS study from 4/2010 to 10/2012. We used multivariable Cox models to compare 30-day MACE (death, recurrent MI, stroke, or unplanned revascularization) and any OUSTO defined bleeding.

Results: Prasugrel was used in 2,997 MI patients (26%) during PCI. Patients treated with prasugrel were younger (median 57 vs. 61 years), more likely to present with STEMI (59% vs. 49%), and less likely to have prior MI (15% vs. 21%) or diabetes (24% vs. 27%) than those receiving clopidogrel (p<0.01 for all). Prasugrel was used in 57 (9%) of patients with prior stroke/TIA, 64 (5%) over age 75, and 74 (14%) of patients <60 kg. Compared with prasugrel, prasugrel was more often started during/after PCI, and used with bivalirudin or GPIIIb/IIa inhibitor. Unadjusted curves for 30-day MACE and bleeding diverged, but were not significantly different between prasugrel and clopidogrel treated patients (Figure). Multivariable analyses did not demonstrate significant differences in MACE (HR 0.96, 95%CI 0.79, 1.16) and bleeding (HR 1.04, 95%CI 0.77, 1.39).

Conclusions: While differences exist in patients receiving these drugs, the 30-day effectiveness and safety of prasugrel vs. clopidogrel were not significantly different in routine practice. Long-term outcomes comparisons are necessary and ongoing.

TCT-3
Outcomes in STEMI patients treated with clopidogrel or prasugrel: A propensity adjusted analysis from the INFUSE-AMI Trial

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Background: Prasugrel was superior to Clopidogrel in a large trial of acute coronary syndromes patients undergoing percutaneous coronary intervention (PCI) with heparin-based anticoagulation. It is not known whether more potent platelet inhibition with Prasugrel rather than Clopidogrel affects infarct size and clinical outcomes when primary PCI is performed with bivalirudin anticoagulation.

Conclusions: In patients treated with clopidogrel after DES, the concomitant administration of PPI is associated with reduced platelet inhibition and adverse clinical outcomes. Additional studies are warranted to determine the risk-benefit ratio of PPI in patients after DES.