2-year real-world outcomes of prasugrel, ticagrelor or clopidogrel therapy following percutaneous coronary intervention from a large multi-centre Australian registry.

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Topic(s):
Acute Coronary Syndromes: Pharmacotherapy

Background: Real-world data comparing outcomes for prasugrel, ticagrelor or clopidogrel use in patients undergoing percutaneous coronary intervention (PCI) is limited, with only smaller cohorts or 12-month observations available.

Methods: Data was collected prospectively from a total of 14 sites around Australia, from November 2008 until March 2019. The cohort included consecutively enrolled patients presenting electively or following acute coronary syndromes who were prescribed dual antiplatelet therapy following PCI. There were no exclusion criteria. The primary end point was the composite of death, myocardial infarction, or stroke at 1 year and 2 years after PCI. Secondary end points included safety, which was the incidence of major bleeding (BARC 3,4 or 5) at discharge.

Results: A total of 12,940 patients were included over a 11-year period. Patients receiving prasugrel were more likely to be male, younger (mean age 62.3±8.7 years), obese and present with STEMI than those receiving either ticagrelor or clopidogrel (all p < 0.001). At 2 years the primary end point occurred in 120 of the 2968 patients (2.8 per 1000pyr) in the ticagrelor group, 446 of 9280 (2.7 per 1000pyr) patients in the clopidogrel group and 21 of 692 (1.8 per 1000pyr) prasugrel group (p = 0.03). Major bleeding was observed in 0.2% in the ticagrelor group, 0.4% clopidogrel group and 0.1% in the prasugrel group (p=0.21).

Conclusion: For the first time we have shown in a large cohort of patients treated by PCI for ACS or CAD significantly lower 2-year rates of death, myocardial infarction and stroke amongst patients who received prasugrel than among those who received either clopidogrel or ticagrelor. The incidence of major bleeding did not differ between antiplatelet therapies.
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