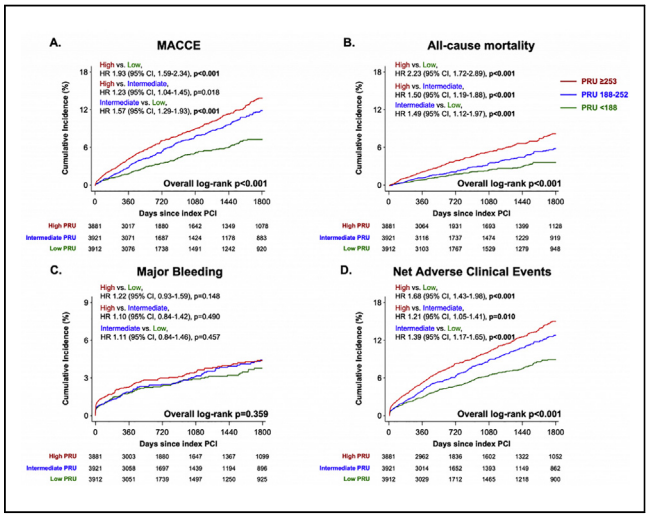

CONCLUSION In this large-scale East Asian cohorts treated with DES, high PRU was significantly associated with occurrence of MACCE, all-death death, and NACE at 5 years.

CATEGORIES CORONARY: Pharmacology/Pharmacotherapy

TCT-31

Clinical Impact of Genetics on Clopidogrel-Based Antiplatelet Therapy After Percutaneous Coronary Intervention Using Drug-Eluting Stent

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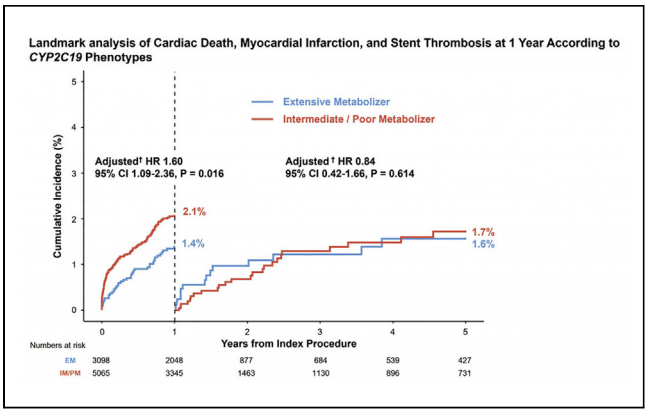
BACKGROUND Although CYP2C19 genotyping can be beneficial when considering treatment with clopidogrel after percutaneous coronary intervention (PCI), whether genotype-guided strategy can be generally adopted in routine practice remains unclear.

METHODS Of 13,160 patients from the nationwide multicenter PTRG-DES registry, patients who underwent CYP2C19 genotyping were selected. Patients were classified according to predicted CYP2C 19 phenotypes: extensive metabolizer (EM) vs intermediate (IM) or poor metabolizer (PM). Primary outcome was a composite of cardiac death, myocardial infarction, and stent thrombosis at 5-year after index procedure.

RESULTS Of 8,163 patients who underwent CYP2C19 genotyping, there were 3,098 (37.9%) in the EM group, 3,906 (47.9%) in the IM group, and 1,159 (14.2%) in the PM group. Mean age of the study population was 64.2 ± 10.8 years, 65.1% were male, and 56.7% were presented with acute coronary syndrome. P2Y12 reaction unit level was significantly different among the 3 groups (EM 194.6 ± 79.5 vs IM 225.0 ± 73.2 vs PM 252.2 ± 74.9; $P < 0.001$). IM or PM group was associated with an increased risk of 5-year primary outcome compared with EM group (HRadj 1.42, 95% CI 1.01-1.98; $P = 0.041$). Unguided de-escalation to clopidogrel monotherapy for IM or PM group was associated with an increased risk of primary outcome at 5 years, compared with EM group without clopidogrel monotherapy (HRadj 2.10, 95% CI 1.35-3.25; $P < 0.001$).



CONCLUSION In patients with clopidogrel-based antiplatelet therapy after DES implantation, CYP2C19 genotyping can stratify patients who are likely to have an increased risk of long-term cardiac death, myocardial infarction, and stent thrombosis.

CATEGORIES CORONARY: Pharmacology/Pharmacotherapy

TCT-32

Platelet Reactivity and Clinical Outcomes After Drug-Eluting Stent Implantation in East Asian Patients According to LV Dysfunction Status: Analysis From the PTRG-DES (Platelet Function and Genotype-Related Long-Term Prognosis in DES-Treated Patients) Registry

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BACKGROUND High platelet reactivity (HPR) refers to lowered responsiveness to P2Y12 inhibitor in patients with CAD undergoing PCI, which is associated with ischemic events. The optimal cutoff which determines HPR is believed to be varied among different ethnic groups. LV dysfunction is often associated with CAD patients undergoing PCI, described as ischemic cardiomyopathy. However, the impact of HPR on clinical outcomes in these patients according to EF status was not previously investigated in a large East Asian PCI cohort.

METHODS The PTRG-DES registry is a multicenter prospective registry in East Asian patients with DES-based PCI with aspirin and clopidogrel therapy. We measured platelet reactivity using VerifyNow point-of-care assay and LVEF by 2D echocardiography to assess the impact of HPR on clinical outcomes (ischemic and bleeding) in conjunction with different LV EF status.

RESULTS From July 9th, 2003 to August 7th, 2018, a total of 13,160 patients were enrolled. Among them, 9,319 (79.6%) patients were finally analyzed. In terms of clinical outcomes, both MACCE and major bleeding were higher in patients with LV dysfunction, compared with those without LV dysfunction (MACCE: HR 2.16, $P < 0.001$, 95% CI 1.86-2.51; major bleeding: HR 1.65, $P< 0.001$, 95% CI 1.31-2.07). The highest rate of MACCE was found in the patients with HF and HPR with statistical significance (HR 3.14 in LV dys(+)/HPR(+) group vs LV dys(−)/HPR(−), $P < 0.01$, 95% CI 2.51-3.91).