



 HYPERTENSION, LIPIDS AND PREVENTION

## EFFECT OF TICAGRELOR VERSUS CLOPIDOGREL ON HIGH PLATELET REACTIVITY DURING MAINTENANCE THERAPY

ACC Poster Contributions  
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**Background:** The effect of Ticagrelor (TG) compared to clopidogrel (CLP) on high platelet reactivity (HPR) during maintenance therapy (MT) is unknown.

**Methods:** We analyzed data from ONSET/OFFSET study and RESPOND study in 127 patients with stable coronary artery disease (CAD) during 75mg/day CLP and 90 mg bid TG maintenance therapy. We determined the frequency of HPR based on previously published cutpoints associated with ischemic risk- >59% 20uM ADP-induced platelet aggregation by light transmittance aggregometry, >235 platelet reaction units (PRU) by VerifyNow P2Y12 assay and >50% platelet reactivity index (PRI) by vasodilator stimulated phosphorotein phosphorylation (VASP-P) assay. All patients were on 75-100mg/day aspirin therapy.

**Results:** CLP maintenance therapy was associated with high frequency of HPR compared TG (Table).

**Conclusions:** During ticagrelor maintenance therapy in CAD patients, HPR is rare as compared to clopidogrel maintenance therapy. The reduction in patients below the platelet reactivity threshold for risk may in part explain the results of the PLATO trial.

	>59% 20uM ADP- Induced Platelet Aggregation	>235 PRU- VerifyNow Assay	>50% PRI- VASP-P assay
Clopidogrel MT	29%	34%	63%
Ticagrelor MT	1.6%	0%	5%