

## Perbandingan reaktifitas platelet oleh ticagrelor dan clopidogrel pada pasien infark miokard dengan elevasi segmen ST = Comparison of platelet reactivity by ticagrelor and clopidogrel in patients with ST segment elevation myocardial infarction

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### Abstrak

Tujuan : Mendapatkan perbandingan reaktifitas platelet jam pertama (dengan alat Multiplate) antara ticagrelor dan clopidogrel.

Latar Belakang : Ticagrelor memiliki kemampuan inhibisi platelet lebih baik dibandingkan clopidogrel. Penelitian PLATO atau substudi PLATO-platelet, dosis clopidogrel hanya 300 mg, dibandingkan dengan ticagrelor 180 mg pada pasien STEMI. Penelitian ini dilakukan untuk menilai reaktifitas platelet pada jam-1,4 dan 8 antara ticagrelor 180 mg atau clopidogrel 600 mg pada pasien STEMI.

Metode : Penelitian random clinical trial, double blind, pasien STEMI dengan naive clopidogrel atau ticagrelor, dilanjutkan tindakan intervensi perkutan primer (PPCI) di RS Jantung Harapan Kita dari April-Juni 2013. Aktifitas platelet diukur jam pertama, jam keempat dan kedelapan dengan alat Multiplate.

Hasil : Didapat 22 pasien STEMI nave clopidogrel/ticagrelor, dengan 11 pasien tiap kelompok. Tidak terdapat perbedaan terhadap usia, onset iskemik, BMI, penyakit penyerta Diabetes Melitus serta waktu pengambilan sampel pemeriksaan antara 2 kelompok obat. Didapat nilai reaktifitas platelet tetap tinggi pada kelompok obat clopidogrel dibandingkan ticagrelor pada jam pertama. Hasil kelompok ticagrelor tetap konstan hingga jam ke-8. Dan penurunan rekatifitas platelet kelompok clopidogrel menurun mendekati nilai yang diharapkan hingga jam 8.

Kesimpulan : Reaktifitas platelet ticagrelor lebih rendah dibandingkan clopidogrel saat jam pertama pasca loading obat. Terdapat 45% (5 pasien) pada kelompok clopidogrel yang tetap memiliki reaktifitas platelet tinggi pada pemeriksaan jam pertama, keempat dan kedelapan, serta 9% (1 pasien) pada ticagrelor yang memiliki kenaikan nilai reaktifitas platelet pada jam keempat dan kedelapan

.....Objectives : This study sought to compare platelet reactivity by 180 mg ticagrelor and 600 mg clopidogrel in primary PCI STEMI patients.

Background: The ability of ticagrelor in inhibiting platelet functions was more potent than clopidogrel in stable CAD and UAP/NonSTEMI patients. According to the PLATO trial or PLATO-platelet substudy, patients treated with 180 mg ticagrelor had better clinical endpoint and more platelet inhibition compared to 300 mg clopidogrel. The study we conducted was to see the platelet reactivity at 1st, 4th, and 8th hour after ingestion of 180 mg ticagrelor compared

to 300 mg clopidogrel in STEMI patients Methods: This is a randomized double blind clinical trial carried out in Department of Cardiology and Vascular Medicine Universitas Indonesia/ National Cardiovascular Center Harapan Kita in April - June 2013. As many as 22 clopidogrel or ticagrelor nave STEMI patients undergoing primary PCI with were recruited. Platelet reactivity (PRU) was assessed by Multiplate at 1,4,8 h after LD.

Result : Both nave ticagrelor and clopidogrel goups had 11 patients each. About 45% patients in clopidogrel group have high reactivity platelet at 1h, 4h and 8 h MEA analysis, and 9%

patients in ticagrelor group have high reactivity platelet at 4h and 8 h MEA analysis.

Conclusion: The action of Ticagrelor in platelet reactivity was lower compared to Clopidogrel in STEMI patients. 45 % patients in clopidogrel group maintained high platelet reactivity at 1st, 4th and 8th hour after LD, while 9% patients in ticagrelor group had high platelet reactivity started at 4th up 8th hour after LD.