

EFEKTIVITAS TERAPI TICAGRELOR DIBANDINGKAN KLOPIDOGREL DALAM MENURUNKAN RISIKO MAJOR ADVERSE CARDIOVASCULAR EVENTS PADA PASIEN PENYAKIT JANTUNG KORONER PASCA PERCUTANEOUS CORONARY INTERVENTION

INTISARI

Latar belakang: Terapi antitrombotik direkomendasikan pada pasien penyakit jantung koroner (PJK) yang menjalani prosedur *percutaneous coronary intervention* (PCI) sebagai terapi pendukung untuk menurunkan *major adverse cardiovascular events* (MACE). Pada beberapa studi, terapi ticagrelor lebih unggul dibandingkan klopidoogrel, namun studi serupa belum dilakukan di Indonesia.

Tujuan: Mengetahui efektivitas terapi ticagrelor dibandingkan dengan klopidoogrel untuk menurunkan risiko MACE pada pasien PJK pasca PCI.

Metode: Penelitian *retrospective cohort* dengan pengamatan selama 1 tahun pasca PCI. 361 pasien yang terdiri dari 111 pasien dengan paparan ticagrelor dan 250 pasien dengan paparan klopidoogrel. Luaran utama adalah MACE yang merupakan gabungan kejadian tindakan revaskularisasi berulang, infark miokard dan kematian. Data dianalisis menggunakan regresi *Cox proportional hazard* analisis yang disesuaikan dengan umur, jenis kelamin, tindakan PCI, komorbid dan terapi yang diberikan bersamaan.

Hasil: MACE terjadi pada 22,7% subyek. Klopidoogrel memiliki risiko MACE yang signifikan lebih tinggi dibandingkan ticagrelor (28,8% dibandingkan 9,0% dengan *hazard ratio* (HR): HR: 1,96 (IK 95% 1,01-3,81, $p=0.047$). Tidak terdapat penurunan risiko kejadian tindakan revaskularisasi berulang (20,40% dibandingkan 5,40%, HR: 2,33, IK 95% 0,99-5,42, $p=0,05$), infark miokard (11,60% dibandingkan 3,60%, HR: 2,08, IK 95% 0,73-5,93, $p=0,17$), dan kematian (1,60% dibandingkan 1,80% dengan HR: 0,77, IK 95% 0,14-4,25, $p=0,77$).

Kesimpulan: Klopidoogrel memiliki risiko MACE lebih tinggi dibandingkan ticagrelor pada pasien PJK pasca PCI, namun tidak ada perbedaan signifikan terhadap risiko kejadian tindakan revaskularisasi berulang, infark miokard dan kematian.

Kata kunci: ticagrelor, klopidoogrel, *percutaneous coronary intervention*, *major adverse cardiovascular events*

EFFECTIVENESS OF TICAGRELOR COMPARED TO CLOPIDOGREL IN REDUCING THE RISK OF MAJOR ADVERSE CARDIOVASCULAR EVENTS IN PATIENTS WITH CORONARY HEART DISEASE AFTER PERCUTANEOUS CORONARY INTERVENTION

ABSTRACT

Background: Antiplatelet therapy is recommended in patients with coronary heart disease (CHD) who had percutaneous coronary intervention (PCI) procedure to reduce major adverse cardiovascular events (MACE). There has been a lack of population-based studies that showed the superior effectiveness of ticagrelor over clopidogrel and similar studies have not been conducted in Indonesia yet.

Objective: To investigate the effectiveness of ticagrelor compared to clopidogrel in reducing the risk of MACE in patients with CHD after PCI.

Methods: A retrospective cohort study with 1 year follow-up was conducted. 361 patients consisted of 111 patients with ticagrelor exposure and 250 patients with clopidogrel exposure. The primary outcome was MACE, defined as a composite of repeat revascularization, myocardial infarction, or all-cause death. The association between antiplatelet exposure and the MACE was analyzed with Cox proportional hazard regression, adjusted for sex, age, comorbidities, PCI procedures and concomitant therapy.

Results: MACE occurred in 22.7% of the subjects. Clopidogrel had a significantly higher risk of MACE compared with ticagrelor (28.8%, vs 9.0%, hazard ratio (HR): 1.96 (95% CI 1.01 to 3.81, $p=0.047$). There were no significant differences in risk of repeat revascularization (20.40% vs 5.40%, HR: 2.32, 95% CI 0.99 to 5.42, $p = 0.05$), myocardial infarction (11.60% vs 3.60%, HR: 2.08, 95% CI, 0.73 to 5.93, $p = 0.17$), and death (1.60% vs 1.80%, HR: 0.77, 95% CI, 0.14 to 4.25, $p = 0.77$).

Conclusion: Clopidogrel had a higher risk of MACE compared to ticagrelor in patients with CHD after PCI, but there were no significant differences in the risk of repeat revascularization, myocardial infarction, and all-cause death.

Keywords: ticagrelor, clopidogrel, percutaneous coronary intervention, major adverse cardiovascular events