

Analisa efektivitas dan biaya dual anti platelet ticagrelor aspirin dibandingkan klopido­grel aspirin pada pasien sindrom koroner akut di RSUPN Cipto Mangunkusumo periode 2014-2016 = Cost effectiveness analysis dual anti platelet ticagrelor aspirin versus clopidogrel aspirin in patients with acute coronary syndrome in Dr Cipto Mangunkusumo hospital during 2014-2016

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Abstrak

Pendahuluan: Jumlah pasien Sindrom Koroner Akut SKA semakin meningkat dari tahun ketahun. Ticagrelor merupakan penghambat P2Y12 dengan onset cepat dan efekhambatan platelet lebih besar dibandingkan klopido­grel, namun memiliki masalahmeningkatnya efek samping perdarahan mayor, efek samping lain, dan biaya yang lebih mahal. Penelitian ini bertujuan melakukan evaluasi efektifitas, keamanan, dan cost effectiveness analysis ticagrelor dibandingkan klopido­grel add on aspirin pada pasien SKA sejak tahun 2014-2016 di RSUPN Cipto Mangunkusumo.

Metode: Penelitian ini menggunakan design kohort retrospektif. Rekam medis dari pasien SKA yang pertama kali didiagnosa dan diterapi dengan klopido­grel dan pasien SKA yang pertama kali didiagnosa dan diterapi dengan ticagrelor dimasukkan dalam kriteria inklusi. Outcome efektivitas adalah insiden major adverse cardiovascular events MACE yang dapat dicegah dalam 3, 6, 9, dan 12 bulan. Outcome safety adalah insiden efek samping yang timbul dalam 3 bulan. Outcome biaya dinilai dengan cost effectiveness analysis CEA. Data untuk CEA disajikan dalam bentuk incremental cost effectiveness ratio ICER. Untuk menilai ketidakpastian data uncertainty digunakan analisa sensitivitas satu arah.

Hasil: Rekam medis dari 123 pasien klopido­grel-aspirin dan 57 pasien ticagrelor-aspirin berhasil dievaluasi. Trend pemakaian ticagrelor semakin meningkat sejak tahun 2014 sampai dengan 2016, sedangkan klopido­grel semakin menurun. Outcome efektivitas adalah MACE yang dapat dicegah dalam 3 bulan. Dalam 3 bulan MACE terjadi pada 15.8 pasien di kelompok ticagrelor dan 31.7 pasien di kelompok klopido­grel RR; 0,498, 95 CI; 0,259 ndash; 0,957, P = 0,039. Tidak ada perbedaan signifikan pada bulan ke 6, 9, dan 12. Ticagrelor memiliki efek samping perdarahan mayor melena lebih tinggi dibanding klopido­grel 5,3 vs 1,62, P = 0,681, terutama pada pasien geriatri. ICER = Rp 279.438,87., dengan pengertian diperlukan tambahan biaya Rp 279.438,87., untuk setiap insiden MACE yang dapat dihindari dalam 3 bulan jika digunakan ticagrelor sebagai DAPT. ICER tersebut dianggap cost effective karena berada dibawah 1 GDP Gross Domestic Product Indonesia tahun 2016, yaitu 3603 Rp 49.000.800.

Kesimpulan: Ticagrelor-aspirin lebih efektif dan lebih cost-effective dalam mencegah MACE dalam 3 bulan dibandingkan klopido­grel-aspirin pada pasien SKA. Masih diperlukan penelitian prospektif lanjutan dengan jumlah besar terutama pada pasien geriatri dengan SKA.

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Introduction The enormous number of acute coronary syndrome ACS cases make it important to evaluate the

economic burden of this illness. Ticagrelor is a P2Y₁₂ inhibitor with pronounced platelet inhibition effect and more rapid onset compared to clopidogrel, with disadvantages of higher price and major bleeding adverse effects. This study aimed to evaluate effectiveness, safety, and cost effectiveness analysis of dual antiplatelet aspirin ticagrelor compared with aspirin clopidogrel at ACS patients in Cipto Mangunkusumo Hospital during 2014-2016.

Methods This is a retrospective cohort study from data records of ACS patient treated in Cipto Mangunkusumo Hospital between 2014-2016 period. ACS patients diagnosed and treated for the first time with aspirin clopidogrel and patients diagnosed and treated for the first time with aspirin ticagrelor were included. Effectiveness outcome were the occurrence of major adverse cardiovascular events (MACE) successfully avoided within 3, 6, 9, and 12 months of antiplatelet treatment. Safety outcome were the incidence of adverse drug reactions within 3 months. Cost outcome were determined with cost effectiveness analysis (CEA). Data for CEA calculation were presented as Incremental Cost Effectiveness Ratio (ICER). One-way sensitivity analysis was performed to evaluate data uncertainty.

Results A total of 123 data records of ACS patients treated with aspirin clopidogrel and 57 with aspirin ticagrelor were evaluated. Trend for antiplatelet prescriptions showed that ticagrelor prescription increased since 2014 until 2016, while clopidogrel decreased. Within the first three months, the MACE rate was 15.8% in ticagrelor group and 31.7% in clopidogrel group (RR 0.498, 95% CI 0.259-0.957, P 0.039). There were no significant differences of MACE between groups after 6, 9, and 12 months treatment. Ticagrelor had insignificant major bleeding (melena) higher than clopidogrel (5.3 vs 1.62, P 0.681), especially in geriatric patients. ICER value was IDR 279,438,87, indicating additional cost needed for every MACE incidence successfully avoided within 3 months if aspirin ticagrelor was used. ICER under 1 Indonesian GDP (Gross Domestic Product) in 2016 (3603, equal to IDR 49,000,800) is considered cost effective.

Conclusions Ticagrelor aspirin is a clinically superior and cost effective option for MACE prevention among ACS patients especially during the first three months antiplatelet treatment. Further prospective research with higher number especially in geriatric patients with ACS is still needed.