

Analisa efektivitas dan biaya dual anti platelet ticagrelor aspirin dibandingkan klopidoagrel 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 klopidoagrel, namun memiliki masalahmeningkatnya efek samping perdarahan mayor, efek samping lain, dan biaya yanglebih mahal. Penelitian ini bertujuan melakukan evaluasi efektifitas, keamanan,dan cost effectiveness analysis ticagrelor dibandingkan klopidoagrel add on aspirinpada pasien SKA sejak tahun 2014-2016 di RSUPN Cipto Mangunkusumo.

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

Hasil:Rekam medis dari 123 pasien klopidoagrel-aspirin dan 57 pasien ticagrelor-aspirinberhasil dievaluasi. Trend pemakaian ticagrelor semakin meningkat sejak tahun2014 sampai dengan 2016, sedangkan klopidoagrel semakin menurun. Outcomeefektivitas adalah MACE yang dapat dicegah dalam 3 bulan. Dalam 3 bulanMACE terjadi pada 15.8 pasien di kelompok ticagrelor dan 31.7 pasien dikelompok klopidoagrel RR; 0,498, 95 CI; 0,259 ndash;0,957, P = 0,039 . Tidak adaperbedaan signifikan pada bulan ke 6,9, dan 12. Ticagrelor memiliki efek sampingperdarahan mayor melena lebih tinggi dibanding klopidoagrel 5,3 vs 1,62 , P= 0,681 , terutama pada pasien geriatri. ICER = Rp 279.438,87., denganpengertian diperlukan tambahan biaya Rp 279.438,87., untuk setiap insidenMACE yang dapat dihindari dalam 3 bulan jika digunakan ticagrelor sebagaiDAPT. 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 MACEdalam 3 bulan dibandingkan klopidoagrel-aspirin pada pasien SKA. Masihdiperlukan penelitian prospektif lanjutan dengan jumlah besar terutama padapasien geriatri dengan SKA.

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Introduction The enormous number of acute coronary syndrome ACS cases make it importantto 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 no significant 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.