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 yanglebih mahal. Penelitian ini bertujuan melakukan evaluasi efektifitas, keamanan,dan cost effectiveness analysis ticagrelor dibandingkan klopidogrel 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 klopidogrel 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 disajikandalam bentuk incremental cost effectiveness ratio ICER . Untuk menilaiketidakpastian data uncertainty digunakan analisa sensitivitas satu arah.

Hasil:Rekam medis dari 123 pasien klopidogrel-aspirin dan 57 pasien ticagrelor-aspirinberhasil dievaluasi. Trend pemakaian ticagrelor semakin meningkat sejak tahun2014 sampai dengan 2016, sedangkan klopidogrel 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 klopidogrel 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 klopidogrel 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 klopidogrel-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 inhibitorwith pronounced platelet inhibition effect and more rapid onset compared toclopidogrel, with disadvantages of higher price and major bleeding adverseeffects. This study aimed to evaluate effectiveness, safety, and cost effectivenessanalysis of dual antiplatelet aspirin ticagrelor compared with aspirin clopidogrelat ACS patients in Cipto Mangunkusumo Hospital during 2014 2016

Methods This is a retrospective cohort study from data records of ACS patient treated inCipto Mangunkusumo Hospital between 2014 2016 period. ACS patientsdiagnosed and treated for the first time with aspirin clopidogrel and patientsdiagnosed and treated for the first time with aspirin ticagrelor were included.Effectiveness outcome were the occurence of major adverse cardiovascular events MACE successfully avoided within 3, 6, 9, and 12 months of antiplatelettreatment. Safety outcome were the insidence of adverse drug reactions within 3months. 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 were performed to evaluate data uncertainty.

Results A total of 123 data records of ACS patients treated with aspirin clopidogrel and57 with aspirin ticagrelor were evaluated. Trend for antiplatelet prescriptionshowed that ticagrelor prescription increased since 2014 until 2016, whileclopidogrel decreased. Within the first three months, the MACE rate was 15.8 inticagrelor group and 31.7 in clopidogrel group RR 0,498, 95 CI 0,259 ndash 0,957, P 0,039 . There were no significant differences of MACE betweengroups after 6, 9, and 12 months treatment. Ticagrelor had unsignificant majorbleeding melena higher than clopidogrel 5,3 vs 1,62 , P 0,681, especiallyin geriatric patients. ICER value was IDR 279.438,87, indicating additional costneeded for every MACE incidence successfully avoided within 3 month if aspirinticagrelorwas used. ICER under 1 Indonesian GDP Gross Domestic Product in2016 3603, equal to IDR 49.000.800 is considered cost effective.

Conclusions Ticagrelor aspirin is a clinically superior and cost effective option for MACEprevention among ACS patients especially during the first three monthsantiplatelet treatment. Further prospective rearch with higher number especially ingeriatric patients with ACS is still needed.