

# Korelasi perubahan kadar CD4, kadar viral load dan indeks massa tubuh terhadap perubahan ketebalan tunika intima media arteri karotis pada pasien HIV na ve yang mendapat terapi antiretroviral = Correlation of changes in cd4 levels, viral load levels and body mass index on changes in thickness of intima tunica in carotid artery media in hiv-na ve patients receiving antiretroviral therapy

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## Abstrak

Latar Belakang: Human immuno deficiency virus/ Acquired Immune Deficiency Syndrome HIV/AIDS merupakan masalah global yang menunjukkan adanya keterkaitan antara kasus HIV/AIDS dengan adanya kejadian aterosklerosis sebagai pemicu terjadinya kasus Penyakit Jantung Koroner PJK . Pemberian Antiretroviral ARV tersebut juga berisiko untuk kejadian PJK melalui mekanisme dislipidemia, lipodistrofi, resistensi insulin dan gangguan hati, yang juga bisa menyebabkan penebalan tunika intima media. Tujuan: Mendapatkan korelasi perubahan kadar CD 4, kadar viral load dan Indeks Massa Tubuh terhadap perubahan ketebalan tunika intima media arteri karotis pada pasien HIV yang mendapat ARV lini pertama selama 12 bulan Metode: Penelitian ini merupakan studi uji korelasi terhadap 54 pasien HIV yang menggunakan data sekunder penelitian JACCANDO PROJECT. Data yang digunakan adalah data USG doppler arteri karotis, hasil CD 4, hasil viral load dan hasil Indeks Massa Tubuh IMT . Hasil: Median CD 4 sebelum pemberian ARV ialah 68 sel/ l, sedangkan median CD 4 sesudah pemberian ARV 286,5 sel/ l. Median kadar viral load sebelum ARV sebesar 1.79 log<sub>10</sub> copy/ml, sedangkan median viral load sesudah ARV yaitu 0 log<sub>10</sub> copy/ml. Median IMT sebelum ARV 19.6, sedangkan median sesudah 12 bulan ARV 19.72. Rerata tunika intima media arteri karotis kiri sebelum dan sesudah pemberian ARV selama 12 bulan ialah 0.58 dan 0.63 dengan p-value 0.031. Korelasi perubahan kadar CD 4 dengan ketebalan tunika intima media arteri karotis kanan r= 0.08, p=0,58 , dan kiri r= 0.01, p=0,965 . Korelasi perubahan kadar viral load dengan ketebalan tunika intima media arteri karotis kanan r= 0.09, p=0,54 dan arteri karotis kiri r= 0.06, p=0,66 . Korelasi perubahan kadar IMT dengan perubahan ketebalan tunika intima kanan r= - 0.11, p=0,37 dan kiri r= -0.18, p=0,19 . Simpulan: Ketebalan tunika intima mengalami peningkatan antara sebelum dan sesudah pengobatan antiretroviral, namun tidak didapatkan korelasi antara kadar CD4, Viral load dan indeks massa tubuh dengan ketebalan tunika intima arteri karotis.

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Background Human immuno deficiency virus Acquired Immune Deficiency Syndrome HIV AIDS is currently a global issue related with coronary artery disease. The effects of antiretroviral ARV is accompanied with some negative features such as dyslipidemia, lipodystrophy, insulin resistance and liver dysfunction which all contribute to increasing tunima intima thickness. Objective To acquire correlation between level of CD4, viral load, and Body Mass Index BMI with changes in tunica intima of carotid artery thickness in HIV patients receiving first line ARV for 12 months Methods This study is a correlation study involving 54 HIV patients using secondary data from the JACCANDO PROJECT research data such as Doppler ultrasound of the carotid artery, CD4 values, viral load as well as BMI. Results Median CD before antiretroviral treatment was 68 cells l, median CD 4 after ARV 286.5 cell l. The median viral load rate

before ARV was 1.79 log<sub>10</sub> copy ml, while median viral load after ARV was 0 log<sub>10</sub> copy ml. The median BMI before ARV was 19.6, while median after 12 months of ARV was 19.72. The mean of the left artery carotid artery intima media before and after ARV administration for 12 months was 0.58 and 0.63 with p value 0.031. Correlation of changes in CD4 levels with the thickness of tunica intima medium of right carotid artery r 0.08, p 0,58 , and left r 0.01, p 0,965 . Correlation of changes in viral load levels with the tunica thickness of the right carotid artery medium r 0.09, p 0,54 and left carotid artery r 0.06, p 0.66 . Correlation of changes in BMI levels with changes in thickness of the right tunica intima r 0.11, p 0.37 and left carotid artery r 0.18, p 0.19 .Conclusion The thickness of intima tunica increased after antiretroviral treatment, but no correlation found between CD4, viral load and BMI level with the thickness of the intima tunica carotid artery.