KORELASI JUMLAH LIMFOSIT T CD4 DENGAN *VIRAL LOAD* RNA HIV PADA PASIEN *Human Immunodeficiency Virus* YANG BELUM MENDAPAT TERAPI ANTIRETROVIRAL

ABSTRAK

Latar Belakang: Inisiasi terapi antiretroviral (ARV) pada pasien *Human Immunodeficiency Virus* (HIV) di negara maju berdasarkan pada pemeriksaan jumlah limfosit T CD4 dan *viral load* RNA HIV, berbeda dengan negara berkembang. Indonesia memakai rekomendasi WHO dalam memulai pemberian terapi ARV yang hanya berdasarkan pada jumlah limfosit T CD4 atau stadium klinis. Tujuan penelitian ini adalah untuk mengetahui korelasi jumlah limfosit T CD4 dengan *viral load* RNA HIV pada pasien HIV yang belum mendapat terapi ARV.

Metode: Penelitian ini merupakan penelitian analitik dengan rancang potong lintang terhadap 30 orang pasien HIV positif yang belum mendapat terapi ARV. Penelitian dilakukan di Laboratorium Sentral RSUP Dr. M. Djamil Padang, mulai Agustus 2015 sampai Juli 2016. Pemeriksaan jumlah limfosit T CD4 dengan metode *Fluorescence imaging optic* dan *viral load* RNA HIV dengan metode *polymerase chain reaction* (PCR). Data dianalisis dengan uji korelasi Spearman. Nilai bermakna jika p <0,05.

Hasil : Median (IQR) jumlah limfosit T CD4 adalah 188,5 (22,5-366,5) sel/mm^3 dan median (IQR) *viral load* RNA HIV sebesar 177.256 (91.886-341.547) kopi/mL. Uji korelasi menunjukkan korelasi negatif sedang yang bermakna secara statistik dengan nilai r = -0,466 dan nilai p = 0,009.

Simpulan : Penurunan jumlah limfosit T CD4 diiring oleh peningkatan *viral load* RNA HIV pada pasien HIV yang belum mendapat terapi ARV

Kata Kunci : HIV, jumlah limfosit T CD4, *viral load* RNA HIV, terapi ARV.

CORRELATION BETWEEN CD4 T LIMPHOCYTE COUNTS WITH HIV RNA VIRAL LOAD IN HIV INFECTED PATIENTS BEFORE RECIEVING ANTIRETROVIRAL THERAPY

ABSTRACT

Background: The initiation of antiretroviral (ARV) therapy in patients with *Human Immunodeficiency Virus* (HIV) at developed country is base on the results of CD4 T limphocyte and HIV RNA viral load counts, in which this method is different at developing country such as Indonesia. In Indonesia, the initiation of this therapy used the WHO recommendation which only based on CD4 T limphocyte counts and clinical stage. The purpose of this study was to determined the correlation between CD4 limphocyte T counts with HIV RNA viral load in HIV infected patients before recieving antiretroviral therapy.

Methods: This was an analytical cross sectional study using 30 HIV infected patients before they were giving ARV therapy. This study was conducted at Central Laboratory of Dr. M. Djamil hospital, Padang, between August 2015 and July 2016. CD4 T limphocyte were account using *Fluorescence imaging optic* method, and HIV RNA *viral load* were examined using *polymerase chain reaction* (PCR) method. Data were analyzed using Spearman's corelation method with p <0,05 consider as significant.

Results : Median (IQR) of CD4 T limphocyte count is 188.5 (22.5-366.5) cell/mm^3, and median (IQR) of HIV RNA *viral load* is 177,256 (91,886-341,547) copy/ml. Spearman correlation test showed a significant moderate negative correlation between CD4 T lymphocytes count and HIV RNA viral load with r = -0.466 and p= 0.009.

Conclusion : Decrease of CD4 T limphocyte count is follow by increase of HIV RNA viral load in HIV infected patients before recieving ARV theraphy.

Keywords : HIV, CD4 limphocyte T count, HIV RNA *viral load*, ARV therapy.