INTISARI

Latar belakang

Penyakit *human immunodeficiency virus* (HIV) termasuk penyakit dengan morbiditas dan mortalitas yang tinggi. Sel T CD4 yang terinfeksi HIV akan memicu sel T CD8+ untuk teraktivasi melepaskan sitokin pro inflamasi pada penderita HIV. Adanya koekspresi CD38 dan HLA-DR pada sel T CD8 dapat menggambarkan aktivasi imun yang merupakan *hallmark* HIV dan sejalan dengan progresifitas penyakit. Sementara itu pemeriksaan *viral load* yang digunakan sebagai monitoring terapi belum diketahui jelas terkait peranannya pada progresifitas HIV. Hubungan antara persentase sel T CD8+/CD38+/HLA-DR+ dengan *viral load* penderita HIV masih kontroversi.

Tujuan

Penelitian ini bertujuan untuk mengetahui hubungan persentase sel T CD8+/CD38+/HLA-DR+ dengan *viral load* penderita HIV.

Metode

Penelitian dilakukan dengan menggunakan rancangan analitik observasional dengan desain potong lintang. Populasi dalam penelitian ini adalah pasien terdiagnosis HIV yang menjalani perawatan di RSUP Dr Sardjito, Yogyakarta selama periode penelitian. Subyek penelitian adalah seluruh pasien HIV baru yang datang berobat ke RS Sardjito selama periode Januari-Desember 2019. Variabel yang diukur pada penelitian ini adalah kadar *viral load* HIV, ekspresi sel T CD8+/CD38+/HLA-DR+, dan semua variabel pengganggu. Data klinis diambil dari *clinical research form* yang telah diisi sebelumnya saat penelitian berlangsung. Analisis Spearman dilakukan untuk mengetahui korelasi antara persentase CD8+/CD38+/HLA-DR+ dengan *viral load* HIV.

Hasil

Sebanyak 67 subjek masuk dalam penelitian dengan median umur 26 tahun (18-60 tahun). Subjek didominasi laki-laki (88,06%). Rerata *viral load* HIV pada subjek sebesar 4,15 ± 1,11 log kopi/mL. Median persentase sel T CD8+ yang mengekspresikan CD38 dan HLA-DR sebanyak 33% (12,5 – 85,6). Uji korelasi mendapatkan r= 0,309 dengan p= 0,011.

Simpulan

Terdapat hubungan signifikan persentase sel T CD8+/CD38+/HLA-DR+ dengan *viral load* penderita HIV dengan r= 0,309. Penelitian lanjutan dengan mempertimbangkan terapi ARV akan membantu penyelidikan lebih lanjut dan potensi pemanfaatannya lebih luas.

Kata Kunci

Human Immunodeficiency Virus (HIV), Persentase Sel T CD8+/CD38+/HLA-DR+, *viral load.*

ABSTRACT

Background
Human immunodeficiency virus (HIV) disease is a disease with high morbidity and mortality. Infected CD4 T cells by HIV will trigger CD8+ T cells to activate and release of pro-inflammatory cytokines. The coexpression of CD38 and HLA-DR on CD8 T cells may indicate immune activation which is HIV hallmark and correlate with disease progression. Meanwhile viral load examination that used as therapy monitoring not known yet as the role in HIV progression. The relationship of percentage of CD8+/CD38+/HLA-DR+ T cells and the viral load of HIV patients still controversial.

Aim
This study aims to determine the relationship between the percentage of CD8+/CD38+/HLA-DR+ T cells and the viral load of HIV patients.

Method
The research was conducted using an observational analytic with cross sectional design. The population in this study were patients diagnosed with HIV who underwent treatment at Dr. Sardjito General Hospital, Yogyakarta. The research subjects were all new HIV patients who came for treatment at Hospital during the period January-December 2019. The variables measured in this study were HIV viral load levels, CD8+/CD38+/HLA-DR+ T cell expression, and all confounding variables. Clinical data was taken from the clinical research form that had been filled in previously during the research. Spearman analysis was done to know the correlation between percentage of CD8+/CD38+/HLA-DR+ with HIV viral load.

Result
A total of 67 subjects were included in the study with a median age of 26 years (18-60 years). Subjects were dominated by male (88.06%). The results of this study showed that the average HIV viral load in the subjects was 4.15 ± 1.11 log copy/mL. The median percentage of CD8+ T cells expressing both CD38 and HLA-DR were 33% (12.5 - 85.6). Correlation test showed positive correlation with r= 0.309 and p= 0.011.

Conclusion
There is a significant relationship between the percentage of CD8+/CD38+/HLA-DR+ T cells and the viral load of HIV patients (r= 0.309). Further research into ARV therapy will help further research and the potential for wider use.

Keyword
Human Immunodeficiency Virus (HIV), T Cell CD8+/CD38+/HLA-DR+ percentage, viral load.