INTISARI

Latar belakang:
Human Immunodeficiency Virus (HIV) merupakan virus yang menyerang sistem kekebalan tubuh dengan insidensi yang tinggi. Pada infeksi HIV terjadi defisiensi sistem imun akibat destruksi sel T *Cluster of Differentiation* 4 (CD4) dan proses inflamasi akibat infeksi dan defisiensi sistem pertahanan tubuh. *C-Reactive Protein* (CRP) merupakan biomarker yang digunakan sebagai penanda inflamasi, namun hubungannya dengan CD4 sebelum terapi ARV belum banyak diteliti.
Tujuan:
Tujuan penelitian ini adalah untuk menganalisis hubungan antara CRP dengan jumlah absolut sel CD4 pada pasien HIV sebelum terapi ARV
Metode:
Penelitian ini merupakan penelitian observasional analitik dengan desain *potong lintang*. Subjek adalah pasien terinfeksi HIV yang belum mendapatkan terapi ARV dan menjalani perawatan di Poliklinik Edelweis RSUP Dr. Sardjito. Jumlah absolut sel *Cluster of Differentiation 4* (CD4) diukur dengan metode *flow cytometry*, dan CRP diukur dengan metode *immunoturbidimetric* menggunakan sampel darah vena. Data karakteristik subjek dan data laboratorium disajikan dalam tabel dan grafik. Hubungan antara kadar CRP dan jumlah absolut sel CD4 dianalisis menggunakan uji korelasi Spearman. Dilakukan sub analisis perbedaan nilai antar kelompok berdasarkan stadium klinis dan *viral load* dengan uji beda *Mann-Whitney* dan *Kruskall Wallis*.
Hasil:
Penelitian ini melibatkan 63 pasien terinfeksi HIV stadium klinis 1 – 4 yang belum mendapatkan terapi ARV dan memenuhi kriteria inklusi. Jumlah sel T CD4 dan kadar CRP ditemukan berbeda secara bermakna antara kelompok stadium klinis dan *viral load* . Terdapat korelasi negatif yang bermakna antara kadar CRP dengan jumlah sel T CD4 (r=-0,375; p=0,0025).
Simpulan:
Terdapat korelasi negatif yang bermakna antara kadar CRP dengan jumlah absolut sel CD4 pada pasien HIV yang belum mendapatkan terapi ARV untuk semua stadium.

Kata kunci: Infeksi *HIV,* CRP, CD4

ABSTRACT

Background:
Human Immunodeficiency Virus (HIV) is a virus that attacks the body's immune system with a high incidence. In HIV infection there is a deficiency of the immune system due to the destruction of *Cluster of Differentiation* 4 (CD4) T cells and the inflammatory process due to infection and deficiency of the body's defense system. C-reactive protein (CRP) is a biomarker that is used as a marker of inflammation, but with CD4 before ARV therapy has not been widely studied.
Objective:
The aim of this study is to analyze the relationship between CRP and absolute number of CD4 in HIV patients before ARV therapy.
Method:
This research is an analytic observational study with a cross sectional design. Subjects are HIV-infected patients who have not received ARV therapy and are undergoing treatment at the Edelweis Polyclinic, Dr. Sardjito. *Cluster of Differentiation 4* (CD4) will be measured by the *flow cytometry* method, and CRP will be measured by the immunoturbidimetric method using venous blood samples. Subject characteristic data and laboratory data will be presented in tables and graphs. The relationship between CD4 cell count and CRP is going to be analyzed using the Spearman correlation test. Sub analysis of differences in scores between groups based on clinical stage and CD4 cell count is using the *Mann-Whitney* and *Kruskall Wallis* difference test.
Result:
This study involved 63 patients infected with clinical stage 1 - 4 of HIV who had not received ARV therapy and met the inclusion criteria. CD4 T cell counts and CRP levels were found to differ significantly between the clinical stage and *viral load* groups. There was a significant negative correlation between CRP levels and the number of CD4 T cells ($r = -0.375$; $p = 0.0025$).
Conclusion:
There was a significant negative correlation between CRP levels and the absolute number of CD4 cells in HIV patients who had not received ARV therapy at all stages.

Keywords: HIV infection, CRP, CD4