

**PENGARUH TERAPI KOMBINASI ANTIRETROVIRAL (ARV) TERHADAP
JUMLAH SEL T CD8⁺ PADA PASIEN TERINFEKSI HIV**

INTISARI

LATAR BELAKANG : Tercatat sebesar 30% kasus infeksi HIV terjadi di Asia Tenggara. Indonesia merupakan salah satu negara di kawasan Asia Tenggara yang memiliki prevalensi dan insidensi infeksi HIV yang cukup besar di dunia dan terapi antiretroviral (ARV) merupakan terapi paling maju yang ada saat ini. Akan tetapi, respon imun pasien masih belum banyak diketahui, terutama terkait jumlah sel T CD8⁺ dan terapi kombinasi ARV. Data di Indonesia terkait hal tersebut juga masih sedikit.

TUJUAN : Mengetahui pengaruh terapi kombinasi antiretroviral (ARV) terhadap rerata jumlah sel T CD8⁺ pada saat bulan ke-0, bulan ke-3, dan bulan ke-6 pasca pemberian terapi ARV.

METODE : Penelitian ini menggunakan 29 partisipan dengan infeksi HIV primer yang termasuk dalam rentang usia produktif (19-51 tahun). Desain penelitian menggunakan observasional longitudinal prospektif dengan metode analisis data berupa deskriptif dan analitik (ANOVA) untuk melihat perbedaan rerata jumlah sel T CD8⁺ pada bulan ke-0, bulan ke-3, dan bulan ke-6 pasca dimulainya terapi. Perhitungan jumlah sel T CD8⁺ diambil dari sampel darah vena pasien dan dianalisis menggunakan *FACS Calibur Flow Cytometer*.

HASIL : Dari hasil analisis deskriptif ditemukan bahwa rerata jumlah sel T CD8⁺ menurun pada bulan ke-3 dan meningkat melebihi awal terapi pada bulan ke-6 pasca terapi. Hal tersebut tidak bermakna signifikan pada uji beda ANOVA ($p = 0,503$). Diperkirakan terdapat beberapa faktor yang terlibat dalam respon sel T CD8⁺ ini, diantaranya adalah sel T CD4⁺ dan *viral load*.

KESIMPULAN : Tidak terdapat perbedaan rerata jumlah sel T CD8⁺ terhadap pemberian terapi kombinasi ARV pada bulan ke-0, bulan ke-3, dan bulan ke-6 pasca dimulainya terapi.

Kata kunci : Infeksi HIV, sel T CD8⁺, terapi kombinasi Antiretroviral (ARV)

THE EFFECT OF ANTIRETROVIRAL (ARV) COMBINATION THERAPY TO THE CD8⁺ T CELL COUNTS IN HIV-INFECTED PATIENTS

ABSTRACT

BACKGROUND : Amounted to 30% of cases of HIV infection occur in Southeast Asia. Indonesia is one of many countries in Southeast Asia that has high prevalence and incidence of HIV infection and antiretroviral (ARV) therapy is the most advanced therapy available today. It becomes our lack that the patient's immune response is still not widely known, particularly regarding to CD8⁺ T cell counts and ARV combination therapy. Whereas, CD8⁺ T cell has main role in human viral infection. Data in Indonesia related to it are also rare.

OBJECTIVE : To determine the effect of ARV combination therapy to CD8⁺ T cell counts during the 0 month, 3rd months, and 6th months after the start of ARV combination therapy.

METHODS : This study used 29 participants with primary HIV infection and they were all included in productive age range (19-51 years old). The design of this study was prospective longitudinal observational and data were analyzed using descriptive and analytical method (ANOVA) to see the difference in the mean of CD8⁺ T cell counts at 0 month, 3rd months, and 6th months after the start of therapy. Calculation of CD8⁺ T cell counts taken from the patient's blood vein and samples were analyzed using FACS Calibur Flow Cytometer.

RESULTS : It can be described that the mean of CD8⁺ T cell counts declined at the 3rd months and increased beyond the start of therapy at 6th months post therapy. However, it was not significantly different based on ANOVA test results ($p = 0.503$). It was estimated that there were several factors involved in the CD8⁺ T cells response to this therapy, such as CD4⁺ T cells and viral load.

CONCLUSION : The mean of CD8+ T cell counts at 0 month, 3rd months, and 6th months after the start of therapy ARV do not significantly change in HIV-infected patients.

Keywords: Antiretroviral (ARV) combination therapy, CD8⁺ T cell, HIV infection