

FAKULTAS KEDOKTERAN

UNIVERSITAS PEMBANGUNAN NASIONAL “VETERAN” JAKARTA

Skripsi, Desember 2025

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**HUBUNGAN DURASI TERAPI ANTIRETROVIRAL DENGAN KADAR CD4⁺
PADA PASIEN ODHA KOINFEKSI TB PARU DI RS IHC PELNI PERIODE
2023-2025**

(CXXIII + 123 halaman, 25 tabel, 5 gambar, 6 lampiran)

ABSTRAK

Pendahuluan: Efektivitas terapi antiretroviral (ARV) pada pasien Orang dengan HIV/AIDS (ODHA) dipengaruhi durasi terapi dan kondisi imun awal, dengan kadar CD4⁺ sebagai indikator utama. Hubungan durasi ARV dengan peningkatan CD4⁺ pada ODHA koinfeksi TBC paru masih bervariasi. Penelitian ini bertujuan menilai karakteristik sosiodemografi dan klinis pasien, kadar CD4⁺ sebelum dan sesudah ARV, serta hubungan durasi ARV dengan kadar CD4⁺ di RS IHC Pelni periode 2023–2025. **Metode:** Penelitian ini menggunakan pendekatan kuantitatif observasional retrospektif dengan desain potong lintang. Data diperoleh dari rekam medis pasien yang menjalani terapi ARV menggunakan lini pertama yaitu TLD+3TC+DTG + DTG 50 dan memiliki catatan kadar CD4⁺ serta status koinfeksi TBC. Pemilihan sampel dilakukan dengan teknik consecutive sampling, dengan jumlah sampel sebanyak 49 pasien dewasa ODHA koinfeksi TB paru. Kadar CD4⁺ dievaluasi sebelum terapi, 6 bulan, dan 12 bulan setelah ARV. Analisis meliputi univariat, uji normalitas Shapiro–Wilk, uji Wilcoxon, dan korelasi Spearman’s Rho. **Hasil:** Pasien dalam penelitian ini sebagian besar berusia 25–49 tahun (71,4%), laki-laki (83,7%), berpendidikan SMA/ sederajat (79,6%), bekerja (91,8%), belum menikah (59,2%), dan kelompok LSL (49%). Sebanyak (91,8%) pasien memiliki TB paru aktif, dan (65,3%) menjalani regimen OAT RHZE. Rata-rata kadar CD4⁺ meningkat dari 104,24 sel/mm³ sebelum terapi menjadi 248,80 sel/mm³ pada 6 bulan dan 324,78 sel/mm³ pada 12 bulan terapi ARV ($p < 0,001$). Analisis korelasi menunjukkan hubungan kuat antarperiode pengukuran (CD4⁺ sebelum ARV–6 bulan: $r = 0,663$; CD4⁺ sebelum ARV–12 bulan: $r = 0,580$; CD4⁺ 6–12 bulan: $r = 0,763$; $p < 0,001$). **Kesimpulan:** Durasi terapi ARV berhubungan positif dan signifikan dengan peningkatan kadar CD4⁺ pada ODHA koinfeksi TBC paru, menegaskan efektivitas ARV dalam memperbaiki kadar CD4⁺ dan pentingnya pemantauan berkala pasien.

Daftar Pustaka : 62

Kata Kunci : antiretroviral, CD4⁺, koinfeksi, ODHA, tuberkulosis paru

FACULTY OF MEDICINE

UNIVERSITAS PEMBANGUNAN NASIONAL “VETERAN” JAKARTA

Undergraduate Thesis, December 2025

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THE ASSOCIATION BETWEEN ANTIRETROVIRAL THERAPY DURATION AND CD4⁺ LEVELS IN HIV/AIDS PATIENTS WITH PULMONARY TUBERCULOSIS COINFECTION AT IHC PELNI HOSPITAL, 2023-2025

(CXXIII + 123 pages, 25 tables, 5 figures, and 6 appendices)

ABSTRACT

Introduction: The effectiveness of antiretroviral (ARV) therapy in people living with HIV/AIDS (PLWHA) is influenced by therapy duration and baseline immune status, with CD4⁺ count as the primary indicator. The relationship between ARV therapy duration and CD4⁺ improvement in PLWHA with pulmonary tuberculosis (TB) coinfection has been inconsistent. This study aimed to assess the sociodemographic and clinical characteristics of patients, CD4⁺ counts before and after ARV therapy, and the relationship between ARV therapy duration and CD4⁺ counts at IHC Pelni Hospital during 2023–2025. **Methods:** This study employed a retrospective quantitative observational approach with a cross-sectional design. Researchers obtained data from the medical records of patients who received first-line antiretroviral (ARV) therapy using the TLD regimen (TDF + 3TC + DTG, plus DTG 50 mg) and had documented CD4⁺ counts and tuberculosis coinfection status. The study used consecutive sampling to include 49 adult PLWHA with pulmonary TB coinfection. The researchers evaluated CD4⁺ counts before therapy and at 6 and 12 months after ARV therapy. Data analysis included univariate analysis, the Shapiro–Wilk normality test, the Wilcoxon test, and Spearman's Rho correlation analysis. **Results:** Most patients were aged 25–49 years (71.4%), male (83.7%), had high school or equivalent education (79.6%), were employed (91.8%), unmarried (59.2%), and MSM (49%). A total of 91.8% had active pulmonary TB, and 65.3% received the RHZE OAT regimen. Mean CD4⁺ counts increased from 104.24 cells/mm³ before therapy to 248.80 cells/mm³ at 6 months and 324.78 cells/mm³ at 12 months of ARV therapy ($p < 0.001$). Correlation analysis showed strong relationships across measurement periods (CD4⁺ pre-ARV–6 months: $r = 0.663$; CD4⁺ pre-ARV–12 months: $r = 0.580$; CD4⁺ 6–12 months: $r = 0.763$; $p < 0.001$). **Conclusions:** ARV therapy duration was positively and significantly associated with increased CD4⁺ counts in PLWHA with pulmonary TB coinfection, confirming ARV effectiveness in improving CD4⁺ levels and emphasising the importance of regular patient monitoring.

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Keywords : antiretroviral, CD4⁺, coinfection, PLWHA, pulmonary tuberculosis.