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Albendazole treatment of HIV-1 and helminth co-infection: a randomized, double-blind, placebo-controlled trial.

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OBJECTIVE: Several co-infections have been shown to impact the progression of HIV-1 infection. We sought to determine if treatment of helminth co-infection in HIV-1-infected adults impacted markers of HIV-1 disease progression. **DESIGN:** To date, there have been no randomized trials to examine the effects of soil-transmitted helminth eradication on markers of HIV-1 progression. **METHODS:** A randomized, double-blind, placebo-controlled trial of albendazole (400 mg daily for 3 days) in antiretroviral-naïve HIV-1-infected adults (CD4 cell count >200 cells/microl) with soil-transmitted helminth infection was conducted at 10 sites in Kenya (Clinical Trials.gov NCT00130910). CD4 and plasma HIV-1 RNA levels at 12 weeks following randomization were compared in the trial arms using linear regression, adjusting for baseline values. **RESULTS:** Of 1551 HIV-1-infected individuals screened for helminth infection, 299 were helminth infected. Two hundred and thirty-four adults were enrolled and underwent randomization and 208 individuals were included in intent-to-treat analyses. Mean CD4 cell count was 557 cells/microl and mean plasma viral load was 4.75 log₁₀ copies/ml at enrollment. Albendazole therapy resulted in significantly higher CD4 cell counts among individuals with *Ascaris lumbricoides* infection after 12 weeks of follow-up (+109 cells/microl; 95% confidence interval +38.9 to +179.0, P = 0.003) and a trend for 0.54 log₁₀ lower HIV-1 RNA levels (P = 0.09). These effects were not seen with treatment of other species of soil-transmitted helminths. **CONCLUSION:** Treatment of *A. lumbricoides* with albendazole in HIV-1-coinfected adults resulted in significantly increased CD4 cell counts during 3-month follow-up. Given the high prevalence of *A. lumbricoides* infection worldwide, deworming may be an important potential strategy to delay HIV-1 progression.