Abstract:

Previously, we have shown that persons with human immunodeficiency virus 1 (HIV-1) infection and reduced CD4+ T-lymphocyte counts excrete significantly fewer Schistosoma mansoni eggs than HIV-1-negative persons with similar intensities of schistosome infections. To determine how antiretroviral therapy (ART) might affect egg excretion, we conducted a study of HIV+ adults living in an area highly endemic for S. mansoni as they began an ART program. Fecal egg excretion and CD4+ T-lymphocyte counts were evaluated at enrollment as well as 2 and 4 weeks after initiation of ART. Fourteen individuals who were Kato-Katz-negative at enrollment subsequently started excreting S. mansoni eggs accompanied by a significant increase in CD4+ T lymphocytes (P = 0.004). Study participants who were S. mansoni egg-positive at enrollment and received both praziquantel and ART also showed significantly increased CD4+ T-lymphocyte counts compared with baseline (P < 0.0001). Our data support a role for CD4+ T lymphocytes in S. mansoni egg excretion.