IN VITRO SUSCEPTIBILITY OF THAI SERONEGATIVE DONOR CD8+ T LYMPHOCYTES TO HUMAN IMMUNODEFICIENCY VIRUS-1 (HIV-1) INFECTION

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To determine whether CD8+ T lymphocytes from Thai donor cells are susceptible to HIV-1 infection, undepleted peripheral blood mononuclear cells (PBMC) and CD8-enriched PBMC were infected with HIV-1 Thai subtype B and CRF01_AE (E) primary isolates. Virus kinetics in HIV-1 infection of CD4+ and CD8+ T lymphocytes peaked at day 7 or 10 post infection (pi); the $TCID_{50}$ used for cell infection was proportional to the level of p24 production in the cultures. We also found that the level of p24 antigen in the supernatants of infected undepleted PBMC was significantly higher than that of infected CD8-enriched PBMC. Interestingly, both single positive T lymphocytes (CD4+ and CD8+ T lymphocytes) as well as double positive CD4+/CD8+ T lymphocytes were infected with HIV-1. The double positive T lymphocytes in PBMC were found only in the presence of both CD4+ and CD8+ T lymphocytes. The majority of p24+/CD4-/CD8- T lymphocytes were HIV-1 infected CD4 down-modulated PBMC. This report provides direct evidence that single positive CD8+ T lymphocytes and double positive CD4+/ CD8+ T lymphocytes from Thai donors can be infected with HIV-1 subtypes B and E *in vitro*.

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THE NATURAL HISTORY OF HIV-1 INFECTION IN YOUNG THAI MEN AFTER SEROCONVERSION

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The natural history and progression of HIV-1 infection in Thailand and other developing countries in Asia and Africa have not been well defined. Nevertheless, valid data are needed to evaluate the effects of interventions, which are designed to delay progression. We evaluated the progression to AIDS and death in 235 men who seroconverted during their 2 years of service in the Royal Thai Army. The men were conscripted at age 21 and seroconverted within a 6-month window during follow-up while in the military. The seroconverters were matched with men who were seronegative when discharged. Of the HIV-positive men, 156 (66.4%) were alive, 77 (32.8%) had died, and 2 (0.8%) could not be located 5-7 years after their seroconversion and discharge from the military. The 5-year survival rate was 82.3%; the median times to clinical AIDS and a CD4 cell count of <200/µL was 7.4 years and 6.9 years, respectively. The mortality rate was 56.3 deaths per 1000 patient-years for HIV-positive men and 6.1 deaths per 1000 patient-years for HIV-negative men. Our data suggest a more rapid progression to AIDS and death after HIV-1 infection in young men in Thailand than has been reported for similarly aged cohorts in developed countries.

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