Immune activation, a co-factor for HIV transmission in Thailand?

Nine—Alain et al. have reported a rate of female-to-male transmission of HIV in Thailand that was many times higher than that observed in western countries and cannot be easily explained. Although the prevalence of sexually transmitted diseases (STD) in the studied group of male military conscripts was high (17%) that alone does not seem to be sufficient to account for such a high transmission rate. The high rate of transmission was observed among the males with no history of STD and the presence of STD seems to increase transmission probability 2-5-fold, whereas the increase in the Thai study was 50-fold.

We have suggested that host co-factors, especially pre-existing immune activation, increase susceptibility to HIV infection and that this accounts, at least in part, for the different epidemiological pattern of HIV infection seen in Africa. In later studies (unpublished), in HIV-seroconvertive Ethiopian immigrants to Israel, we found several markers of immune activation in a large proportion of individuals tested. Besides increased serum IgG and IgA levels they had increased interleukin-2 secretion and activated lymphocyte necrosis factor (TNF), probably the result of chronic infections, primarily parasitic and helminthic. If found also among Thais, such an immune activation might account for the unusual rate of HIV transmission observed in the Thai soldiers and for the rapid spread of AIDS in that country.