

HIV AND HTLV-I

EPIDEMIOLOGY

HTLV-1 seroprevalence rates in the Caribbean vary from 0.3% to 7% in the general population, to 2% to 7% in pregnant women, and 5% in HIV-infected persons.ⁱ Although HTLV-1 and HIV have similar routes of transmission (perinatal, parenteral, and sexual), transmission of HTLV-1 is less efficient.ⁱⁱ Sexual transmission is more frequent from male-to-female than *vice versa*.ⁱⁱⁱ Perinatal transmission of HTLV-1 occurs primarily via breastfeeding, and although breastfeeding for more than six months is a significant risk factor for perinatal transmission, periods less than six months may, in fact, protect against transmission.^{iv}

CLINICAL MANIFESTATIONS

HTLV-1 is associated with adult T-cell leukaemia/lymphoma (ATL) and HTLV-1-associated myelopathy/tropical spastic paraparesis (HAM/TSP), but 95% of those infected with HTLV-1 never develop symptoms.^v Infective dermatitis is a common HTLV-1-associated condition in the Caribbean characterised by persistent refractory coetaneous infections with saprophytic staphylococcal and streptococcal bacteria.^{vi} A variety of other clinical conditions, including uveitis, arthritis, and Sjogren's syndrome, have been anecdotally associated with HTLV-1 infection.^{vii}

POSSIBLE INTERACTIONS BETWEEN HTLV-1 AND HIV

Co-infection of the same cell by HTLV-1 and HIV is possible.^{viii} Some studies suggest a more severe clinical course with shortened survival for AIDS patients co-infected with HTLV-1, whereas others demonstrated no detrimental effect of HTLV-1 upon progression of HIV infection.^{ix}

DIAGNOSIS

Diagnosis of HTLV-1 infection requires positive serum HTLV-1 ELISA with confirmatory Western blot assay. PCR is more sensitive and specific than serologic testing, and could be considered for patients seronegative by conventional testing.

TREATMENT

Although there is no curative treatment for HAM/TSP, mild to moderate beneficial effects have been reported with corticosteroids, immunosuppressants, gamma-globulin, and vitamin C.^x The HTLV-1 protease enzyme is distinct from the HIV protease enzyme, suggesting that some medications used for HIV infection may not be effective for HTLV-1 infection.^{xi} *In vitro* studies of the PIs indinavir (IDV), saquinavir (SQV), zidovudine (ZDV), and nelfinavir (NFV), have demonstrated no effect of these medications upon HTLV-1.^{xii} Two nucleoside analogues, AZT and zalcitabine (ddC), inhibit the production of proviral HTLV-1 DNA *in vitro*.^{xiii} In people with HAM/TSP, use of AZT was associated with improvement in neurologic function, but no improvement was noted in non-ambulatory patients.^{xiv} Chemotherapy can be curative for ATL, but is less successful for acute and lymphoma-type ATL.

PREVENTION

Guidelines published by the CDC and the U.S. Public Health Service (USPHS) recommend that an HTLV-1-infected person should: not donate blood, semen, body organs, or other tissues; not share needles or syringes; not breastfeed infants; and consider using latex condoms to prevent sexual transmission.^{xv} In resource poor settings, or in areas where clean water is not available for baby formula, breastfeeding for six months may be necessary. In HIV-infected persons, condom use would likely prevent acquisition or transmission of HTLV-1.

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