Letters

HTLV-III/LAV–Seronegative, Virus-Negative Sexual Partners and Household Contacts of Hemophiliacs

To the Editor.—Public concern about the transmissibility of human T-cell lymphotropic virus type III/lymphadenopathy-associated virus (HTLV-III/LAV) has been heightened by several reports suggesting the existence of an antibody-negative, virus-positive state in some asymptomatic sex partners of persons who are antibody positive.[1-5] We recently evaluated 88 household members and/or sex partners of persons with hemophilia and found that only two nonhemophiliacs were HTLV-III/LAV antibody-positive.[6] We report herein the results of culturing peripheral blood lymphocytes of 20 of the nonhemophiliac contacts whose index hemophiliac was antibody positive.

Report of a Study.—These contacts included ten of 14 sex partners of 12 persons with either the acquired immunodeficiency syndrome (AIDS) or the AIDS-related complex, two of 16 sex partners of asymptomatic hemophiliacs, and eight household members who were not sex partners (four fathers, three mothers, and one brother of six asymptomatic hemophiliacs aged 5 to 13 years). Sex partners reported having vaginal or oral intercourse from fewer than once to eight or more times per month (median, four to eight times per month); other household members had nonsexual contact with the index hemophiliac. Participants were 15 to 71 years old (median, 34.5 years).

Serum samples were collected under sterile conditions and cells were frozen and stored at −60 °C until tested.[7] Serum samples were assayed for the presence of antibody to HTLV-III/LAV structural proteins by Western blot analysis using the methods of Tsang et al.[6,8] Lymphocyte samples were cocultured with phytohemagglutinin-stimulated lymphocytes, to which 5% interleukin-2 had been added. Lymphocyte cultures were monitored for viral replication with immunofluorescence and particulate reverse transcriptase assays[9] by persons who were unaware of the characteristics of the donors. When evidence of infection was noted by these methods, the cells were also examined by electron microscopy for viral particles.

Only one household member was virus positive. She was the wife of a hemophiliac patient with AIDS and, at the time of evaluation, she was both antibody positive and an AIDS patient.[6,10] The remaining sex partners and household members had had no detectable HTLV-III/LAV antibody or virus.

Comment.—These results, in contrast to those of two frequently quoted reports,[3,4] suggest that sex partners, as well as household contacts who are not sex partners of hemophiliacs, are seldom antibody negative and virus positive. However, virus may be present in the lymphocytes of some asymptomatic persons at titers too low to produce infectivity in culture. Furthermore, the number of persons tested in both studies is quite small and thus the significance of these disparate findings will be determined by further studies.

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1. Salahuddin SZ, Markham PD, Redfield RR, et al: HTLV-III in symptom-free seronegative persons. *Lancet* 1984;2:1418-1420.

2. Redfield RR, Markham PD, Salahuddin SZ, et al: Frequent transmission of HTLV-III among spouses of patients with AIDS-related complex and AIDS. *JAMA* 1985;253:1571-1573.

3. Goedert JJ, Eyster ME, Bodner AJ, et al: A search for HTLV-III and its antibodies in hemophilia families, abstract. Presented at the First International Conference on AIDS, Atlanta, April 14-17, 1985.

4. Markham PD, Salahuddin SZ, Popovic M, et al: Advances in the isolation of HTLV-III from patients with AIDS and AIDS-related complex and from donors at risk. *Cancer Res* 1985;45(suppl 9):4588-4591.

5. Weiss SH, Saxinger WC, Rechtman D, et al: HTLV-III infection among health care workers: Association with needle-stick injuries. *JAMA* 1985;254:2089-2093.

6. Jason JM, McDougal JS, Dixon G, et al: HTLV-III/LAV antibody and immune status of household contacts and sexual partners of persons with hemophilia. *JAMA* 1986;255:212-215.

7. Nicholson JK, Jones BM, Cross GD, et al: Comparison of T and B cell analyses on fresh and aged blood. *J Immunol Methods* 1984;73:29-40.

8. Tsang VCW, Peralta JM, Simons AR: Enzyme-linked immunoelectrotransfer blot technique for studying the specificities of antigens and antibodies separated by gel electrophoresis. *Methods Enzymol* 1983; 92:377-391.

9. Feorino PM, Kalyanaraman VS, Haverkos HW, et al: Lymphadenopathy-associated virus infection of a blood donor-recipient pair with acquired immunodeficiency syndrome. *Science* 1984;225:69-73.

10. Pitchenik AE, Shafron RD, Glasser RM, et al: The acquired immunodeficiency syndrome in the wife of a hemophiliac. *Ann Intern Med* 1984;100:62-65.

The Prevalence of HTLV-III/LAV Antibodies in Heterosexuals

To the Editor.—The prevalence of antibodies to human T-cell lymphotropic virus type III/lymphadenopathy-associated virus (HTLV-III/LAV) in those groups with the highest incidence of acquired immunodeficiency syndrome has been investigated vigorously. Reports of the heterosexual transmission of HTLV-III/LAV from both intravenous drug abusers and hemophiliacs to their sexual partners[1,2] have given credence to the theory that the virus is being introduced into populations without established risk factors in North America and Europe. The prevalence of antibody to HTLV-III/LAV in sexually active heterosexuals is unknown but is thought to be low.

As an adjunct to a study of the prevalence of antibodies to herpes simplex viruses in serum samples obtained from heterosexuals attending a sexually transmitted disease clinic during 1985, we determined the prevalence of antibodies to HTLV-III/LAV. Serum samples were screened by enzyme immunoassay, and those found positive were "confirmed" by Western blot technique.[3] Two (1.1%) of 185 samples were positive for antibody to HTLV-III/LAV. Both positive individuals were heterosexual men. Further follow-up of these patients was not possible because personal identifiers had been removed before we received this collection of samples.

These results should be viewed as an observation on the prevalence of HTLV-III/LAV antibody in a small group of self-described heterosexuals. However, these preliminary findings may suggest the importance of the timely development of surveillance efforts among sexually active heterosexuals. Because of the lengthy interval between the appearance of detectable antibodies and the onset of clinical disease, the results of surveillance based on serological screening

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