Medical News

EDITED BY ELAINE LARSON, RN, PHD

From the Centers for Disease Control

UPDATE: INVESTIGATIONS OF PATIENTS WHO HAVE BEEN TREATED BY HIV-INFECTED HEALTHCARE WORKERS

Investigation of the patients of a Florida dentist with acquired immunodeficiency syndrome (AIDS) concluded that human immunodeficiency virus (HIV) was transmitted to five (0.5%) of approximately 1,100 patients who were evaluated.[1-3] Although the precise events resulting in transmission of HIV to these patients are not known, the findings of the investigation support direct dentist-to-patient transmission, rather than a patient-to-patient route. This report summarizes information from other published studies of patients who were treated by HIV-infected healthcare workers[4-10] as well as from completed and ongoing unpublished investigations that have been reported to the Centers for Disease Control (CDC).

In addition to the patients in the Florida dental practice, as of May 13, 1992, CDC was aware of HIV test results for 15,795 patients who were treated by 32 HIV-infected healthcare workers. The total number of patients treated by these healthcare workers and the number of patients who underwent invasive procedures are not known. No seropositive persons were reported among 10,270 patients who were tested from the practices of 23 of these 32 healthcare workers. The 23 healthcare workers comprised 11 dentists/dental students, six surgeons/obstetricians, and six other physicians in various nonsurgical subspecialties. For the remaining nine healthcare workers (five dentists and four surgeons/obstetricians), 5,525 of their patients were tested, and 84 HIVinfected patients were identified.

Followup has been completed for 47 of the 84 seropositive patients; seven patients had established risk factors identified (e.g., intravenous drug use, receipt of a blood transfusion from a retrospectively identified HIVinfected donor, male-to-male sexual contact); five were documented to be infected before receiving care from the HIV-infected healthcare workers; and the remaining 35 were male inmates in a state correctional facility. These 35 inmates were among a total of 962 male inmates who received treatment from two HIV-infected dentists and for whom HIV-antibody test results are known. The rate of HIV infection for inmates tested (3.6%) was less than that documented among male inmates upon entrance into the state correctional system (8.6%). Established risk factors were identified for 33 of the 35 inmates. Because both dentists have died, specimens for HIV genetic sequence analysis are not available. Further investigation of these infected inmates is not planned.

The 37 HIVinfected persons for whom investigations are in progress were patients treated by the following three healthcare workers.

Dentist 1

This dentist practiced in an area with a high background prevalence of HIV infection. Of 1,162 patients tested thus far, 29 are HIVinfected. Established risk factors could not be identified for 17 of the 29 patients, but epidemiologic investigations determined that many may have had opportunities for exposure to HIV (e.g., multiple sex partners and/or exchange of sex for drugs or money). HIV genetic sequence analyses are in progress at the CDC for the dentist and the infected patients.

Dentist 2

More than 800 patients of this dentist were tested, and five were positive for HIV Epidemiologic investigations have been completed for all five patients; three patients had established risk factors identified; a fourth patient was documented to be seronegative 18 months after the last visit to the dentist but was seropositive when retested two years later. For the remaining patient, no risk factors were identified. This patient had one visit to the dentist for an examination. HIV genetic sequence analyses are underway at the CDC for the dentist and the five infected patients.

https://doi.org/10.1086/646582 Published online by Cambridge University Press

Surgeon 1

Three of 328 patients who were tested were positive for HIV antibody. Preliminary information suggests that risk factors are likely for all three persons; investigations are in progress.

REFERENCES

1. The Centers for Disease Control. Update: transmission of HIV infection during invasive dental procedures----Florida. *MMWR.* 1991;40:377-381.
2. Ciesielski C, Marianos D, Ou C-Y, et al. Transmission of human immunodeficiency virus in a dental practice. *Ann* Intern *Med.* 1992;116:798-805.
3. Ou C-Y, Ciesielski CA, Myers G, et al. Molecular epidemiology of HIV transmission in a dental practice. Science. (in press).
4. Porter JD, Cruickshank JG, Gentle PH, Robinson RG, Gill ON. Management of patients treated by a surgeon with HIV infection. *Lancet.* 1990;335:113-114.
5. Armstrong FP, Miner JC, Wolfe WH. Investigation of a health-care worker with symptomatic human immunodeficiency virus infection: an epidemiologic approach. *Milit Med.* 1987;152:414-418.
6. Mishu B, Schaffner W, Horan JM, Wood LH, Hutcheson R, McNabb I? A surgeon with AIDS: lack of evidence of transmission to patients. *JAMA.* 1990;264:467-470.
7. Danila RN, MacDonald KL, Rhame FS, et al. A look-back investigation of patients of an HIV-infected physician-public health implications. *N Engl J Med.* 1991;325:1406-1411.
8. *Comer* RW, Myers DR, Steadman CD, Carter MJ, Rissing JP, Tedesco FJ, Management considerations for an HIV-positive dental student. *J Dent Educ.* 1991;55:187-191.
9. Hamory BH, Zanotti M, Rohrer VG. HIV "look-back" involving an OB/GYN resident. In: ***Abstracts from the Second Annual Meeting of the Societyfor Hospital Epidemiology of America.*** West Deplford, NJ: Society for Hospital Epidemiology of America; 1992:34.
10. Dickinson G, Bisno A, Morhart R, Klimas N, Laracuente J. Human immunodeficiency virus infection among patients of a dentist with AIDS. *Clin* Res. 1992;40:219A.
11. Chamberland ME, Bell DM. HIV transmission from health care worker to patient. What is the risk? *Ann Intern Med.* 1992;116:871-873.
12. Centers for Disease Control. HIV prevalence estimates and AIDS case projections for the United States: report based upon a workshop. *MMWR.* 1990;39(RR-16):1-31.

OUTBREAK OF PHARXNGOCONJUNCTIVAL FEVER AT A SUMMER CAMP—NORTH CAROLINA, 1991

On July 19, 1991, the Communicable Disease Section of the North Carolina Department of Environment, Health, and Natural Resources (DEHNR) was notified that an outbreak of acute upper respiratory illness had occurred in campers and counselors at a four-week summer camp. Manifestations of the illness included pharyngitis, cough, fever to 104" (40°C), headache, myalgia, malaise, and conjunctivitis. On August 2, the DEHNR was notified of a similar outbreak during a second four-week session at the camp. The epidemiologic investigation, initiated by the DEHNR on August 7, identified the cause as pharyngoconjunctival fever (PCF) associated with infection with adenovirus type 3. This report summarizes findings from the investigation.

The first camp session (June 16-July 12) was attended by 768 boys aged 7-16 years and 300 counselors aged 17-22 years. On July 12, first-session campers returned home, but counselors remained at the camp for the second session (July 14-August 9), which 800 boys attended, Approximately 700 persons swam each day in a one-acre, human-made pond that had a maximum depth of ten feet. Well water was continuously pumped into the pond at multiple sites through pipes located one foot below the surface of the water; the water overflowed, through a spillway, into an adjacent river. An automatic chlorination system treated the water before it entered the pond. The pond water was turbid, and plants grew in the bottom of the pond.

During the first session, 226 persons (175 campers and 51 staff members [i.e., counselors, administrative staff, and infirmary personnel]) visited the camp infirmary because of onset of symptoms of upper respiratory illness. During the second session, 369 campers and 86 staff members visited the infirmary with the same upper respiratory manifestations noted during the first session.

A convenience sample of 181 campers from the second session and 40 staff members at the camp was interviewed. A case of PCF was defined as two of four symptoms-sore throat, fever, cough, and red eyes—lasting more than one day. The attack rate for those surveyed was 112 (52%) (88 campers and 24 staff members) of 216; duration of illness was unknown for five individuals.

Every camper swam at least once during the four weeks; 158 (90%) of 175 swam one or more times per day. The attack rate for campers who swam daily (74 [48%] of 153) did not differ significantly from that for campers who swam less than once per week (11 [65%] of 17 [relative risk (RR) = 0.8; 95% confidence interval (CI_{95}) = 0.5-1.3]). The attack rate for staff who swam was higher than that for staff who did not swim (10 [77%] of 13 versus 13 [54%] of 24 [RR= 1.4; CI,, = 0.9-2.31) and increased with increased frequency of swimming. The attack rate for nonswimmers was 54% (13 of 24); for infrequent swimmers (i.e., those who swam once per week or less) was 75% (six of eight); and for frequent swimmers (i.e., those who swam three or more times per week) was 80% (four of five). Of the 221 campers and staff members interviewed, 75 (41 campers and 34 staff members) reported whether they had shared a towel with another person. Towel sharing increased the risk for illness (11 of 12 who shared versus 31 of 63 who did not [RR = 1.9; CI, = 1.4-2.51).

Of viral cultures (nasopharyngeal and throat swabs obtained from 25 ill persons), 19 grew adenovirus serotype 3. Convalescent geometric mean titres

https://doi.org/10.1086/646582 Published online by Cambridge University Press