Medical News

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HIV Transmission From Surgeon to Patient

The French National Public Health Network recently reported an investigation of HIV transmission from an orthopedic surgeon to a patient in Saint Germain en Laye (outside of Paris).

In October 1995, after the HIV seropositive status of the orthopedic surgeon was announced in the medical press, the French Director of General Health decided to inform, and offer testing to, the patients operated on by this surgeon.

An epidemiological investigation was conducted jointly by the hospital of Saint Germain en Laye, the National Public Health Network, and the Coordinating Center for Combating Nosocomial Infections of Northern Paris. The investigation involved three phases: a review of the medical history of the surgeon; identification of, and offering HIV testing to, patients operated on by the surgeon during a period when the patients may have been at risk; and assessing the surgeon's practice, in conjunction with the surgeons and infection control personnel of the hospital. An information center was established at the hospital to handle telephone calls, arrange consultations with patients, and offer HIV testing, if appropriate.

Review of the medical history of the surgeon suggests that he most probably became infected with HIV in May 1983. The diagnosis of HIV seropositivity and AIDS were made simultaneously in March 1994.

The investigation identified 3,004 patients who had undergone at least one invasive procedure by the surgeon; 2,458 of these patients were contacted by mail. The serologic status of 968 patients was determined; 967 were seronegative (32.2% of the total population and 39% of patients contacted). Only one patient, who was seronegative before the operation performed by the surgeon in 1992, is seropositive. The records indicated that this patient's orthopedic procedure lasted 10 hours.

The laboratory of Luc Montagnier, Director of the National Center for Virology at the Pasteur Institute, performed the typing of the viral strains of the virus from the patient and the surgeon and compared nucleotide sequences. Phylogenetic trees obtained from different methods indicated that the viruses were closely related.

Assessment of the surgeon's surgical practices indicated that the surgeon did experience wounds and cuts during surgery that may have exposed patients to his blood, although no injury was documented during the procedures on this specific patient. It also notes that the surgeon's exposures seemed to be related more to orthopedic surgical technique than to the practice of the surgeon himself.

The infection control procedures in effect in the operating room were in accordance with recommendations for prevention of accidental exposures to blood, standard techniques for orthopedic surgery, and sterilization of medical equipment.

The report concludes that several epidemiological arguments are in favor of nosocomial HIV transmission. The patient was seronegative before the operation performed by the surgeon and had no other risk factors for HIV infection; the patient had a particularly prolonged duration of exposure to the risk (surgery for over 10 hours); and the surgeon's viral load could have been elevated at the time of operation on the patient. Finally, the epidemiological investigation, confirmed by the viral sequencing comparisons of the patient's and surgeon's virus, indicated that this transmission is "highly probable." The Director General of Health reinforced the recommendations that Universal Precautions be followed and that these recommendations be disseminated once again to all healthcare settings.

Representatives of the US Centers for Disease Control and Prevention (CDC) have been in communication with the French investigators and believe that the clinical and epidemiological information that is available suggests that the patient acquired HIV infection from the surgeon during an operation.

This is only the second reported case of an HIV-infected healthcare worker (HCW) transmitting HIV to a patient during an invasive procedure, the first case being the widely publicized 1991 Florida dental case investigation that indicated HIV was transmitted from a dentist with AIDS to a total of six patients.

FROM: National Public Health Network (France)/ Reseau National de Sante Publique. Report on HIV transmission from an infected surgeon to one patient in France, January 17, 1997; and

Simons M. French doctor with AIDS reportedly infects patient in surgery. *New York Times* January 17, 1997:A4.

Nosocomial Malaria

A cluster of acute *Plasmodium falciparum* malaria (AFM) cases in a hospital in Riyadh, Saudi Arabia, prompted an epidemiological investigation to determine mode of transmission. Researchers from the Saudi Arabia Ministry of Health and the CDC assisted with the investigation, which included reviewing all AFM patients admitted to one pediatric hospital from December 1991 to April 1992.

Malaria was considered acquired locally (LAFM) if during the month before the onset the patient had not visited a malaria area and as hospital-acquired (HAFM) if the LAFM patient had been admitted to the hospital during that