Medical News

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HIV Transmission by a Human Bite

The transmission of HIV-1 infection by a human bite is assumed to be biologically possible, but has remained unproven. To date, there have been only two case reports in the literature suggesting transmission by this route. Recently, however, researchers from the Department of Infectious Disease, Clinical Center in Ljublijana, Slovenia, reported a documented HIV seroconversion that occurred after a bite.

The case involved a 47-year-old male with AIDS who first presented with esophageal candidiasis in June 1994 and a CD4 lymphocyte count of 40×10^6 L and a Western blot that showed consistently strong reactivity to gp120 and gp160 only. The HIV-1 p24 antigen test was positive, and a high level of HIV-1 RNA was present in his plasma, all suggesting late-stage HIV-1 infection. He was started on zidovudine, and his condition improved.

Eleven months later, the patient had a grand mal seizure at home. His neighbor, who was unaware of his diagnosis, attended to him during his seizure and was bitten while placing his fingers in the patient's mouth trying to prevent airway obstruction. The neighbor reported that the bite resulted in a small crack and a shallow wound on his finger with teeth imprints but without visible bleeding. Right after the incident, the bitten man noticed blood in the biter's saliva.

One hour later, a physician confirmed the neighbor's description of the wound. Serum taken from the bitten man on the day of the injury was negative for HIV-1 and HIV-2 antibodies, p24 antigen, and HIV-1 RNA. Ten hours after the injury, zidovudine prophylaxis was started. Five weeks after the incident, the bitten man reported symptoms consistent with acute primary HIV-1 infection (fatigue, headache, and sore throat). One week after his symptoms developed, serologic tests showed anti-p24 and anti-p55 antibodies only; p24 antigen test was negative. The bitten man seroconverted completely 54 days after the incident. The bitten man was married for 23 years, his wife consistently tested negative for HIV-1 antibodies, and he denied any risk factors for HIV.

The authors comment that blood in the biter's saliva most probably was crucial for HIV transmission in this case. The bite occurred 13 days before the death of the patient, in his terminal stage of HIV infection, so a high viral load may explain the relatively short time from exposure to seroconversion in the bitten man.

FROM: Vidmar L, Poljak M, Tomazic J, et al. Transmission of HIV-1 by human bite. *Lancet* 1996; 347:1762-1763.

Nationwide Drop in Percutaneous Injuries

Data from 56 hospitals participating in the EPINet data-sharing network have shown a 32% reduction in percutaneous injuries reported in 1995 as compared to 1994 and 1993. The hospitals vary in size, teaching status, and geographic diversity.

In 1993 and 1994, the overall annual injury rate, calculated by dividing the total number of annual injuries by the average daily census, remained constant at 32 injuries per 100 occupied beds. However, in 1995, the injury rate dropped to 22 injuries per 100 occupied beds. The overall decrease in the number of sharp object injuries was consistent among hospitals, regardless of location, teaching status, or size.

Dr. Janine Jagger, who leads the Health Care Worker Safety Center that coordinates the EPINet data-sharing network, noted that the uniformity of this national decline among different types of hospitals in different geographic regions was surprising. In a recent article in *Advances in Exposure Prevention,* Jagger explains that the decline is not due to a decline in the length of hospital stay or reduced patient census, because these factors are controlled for when percutaneous injury rates are reported per 100 occupied beds. The possible reasons for this decline are still being investigated.

FROM: Jagger J, Bentley B. Substantial nationwide drop in percutaneous injury rates detected for 1995. *Advances in Exposure Prevention* May/June 1996.

Additional news items in this issue: Repeat Fit Testing Not Routinely Required, page 635; Community-Acquired and Nosocomial Bacteremia Trends, page 640; Drug-Resistant Acinetobacter baumanii, *page 659; OSHA and JCAHO Form Partnership, page 671; Computer Reminders Did Not Improve Inpatient Preventive Care, page 686; Labor Department Launches Worker Safety Program for Nursing Homes, page 693.*

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