

Medical News

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Additional news items in this issue: *Efficacy of Antiseptic-Impregnated Central Venous Catheters*, page 236; *Ventilator-Associated Pneumonia: Role of Anaerobes*, page 241; *Bacillus cereus Outbreak From Contaminated Ventilator Circuits*, page 287.

Simultaneous Infection With HIV and HCV Following Conjunctival Exposure

The first reported case of simultaneous infection with HIV and hepatitis C virus (HCV) following an occupational conjunctival blood exposure was reported recently by Ippolito and colleagues from the Center for AIDS Referral, Rome.

A clinical laboratory worker sustained a conjunctival blood splash of approximately 0.5 mL when disposing of open tubes of blood from known HIV-infected patients. There was no contact of blood with the worker's mouth and no open lesions on the skin. The worker's baseline HIV and HCV tests were negative. The worker was started on zidovudine within 3 hours of the exposure, but developed acute HIV infection 28 days after the exposure. The worker's HIV antibody (EIA) and confirmatory Western blot were positive 52 days after exposure, HCV EIA antibody was positive at 3 months, and HCV RIBA was positive after 6 months.

The authors comment that zidovudine should not be considered as a monotherapy for postexposure prophylaxis for HIV exposures and that all steps in blood processing should be designed to eliminate the possibility of exposure, including the use of covered blood tubes at all times.

FROM: Ippolito G, Puro V, Petrosillo N, De Carli G, Micheloni G, Magliano E. Simultaneous infection with HIV and hepatitis C virus following occupational conjunctival blood exposure. *JAMA* 1998;280:28.

Inactivation of Norwalk-Like Virus

Norwalk and Norwalk virus-like particles ([NVLPs] also known as small round-structured viruses) are members of the family *Caliciviridae* and are important causes of gastroenteritis in humans. Little is known about their survival in the environment or the disinfection procedures necessary to remove them from contaminated settings. As NVLPs cannot be grown in tissue culture, survival studies require the use of a closely related cultivable virus. Doultree and coinvestigators report the survival of the feline calicivirus (FCV) after exposure to commercially available disinfectants and a range of environmental conditions. Disinfectants tested included glutaraldehyde, iodine, hypochlorite, a quaternary ammonium-based product, an anionic detergent, and ethanol.

Complete inactivation of FCV required exposure to 1,000 ppm freshly reconstituted granular hypochlorite or 5,000 ppm pre-reconstituted hypochlorite solution.

Glutaraldehyde and the iodine-based product effectively inactivated FCV, whereas the quaternary ammonium product, detergent, and ethanol failed to inactivate the virus completely. The stability of FCV in suspension and in a dried state was assessed after exposure to 4°C, 20°C, and 37°C. With increasing temperature, the stability of FCV was found to diminish both in suspension and in the dried state. FCV in the dried state did not survive for 1 day at 37°C. This study provides a basis for establishing guidelines for disinfection protocols to decrease the spread of NVLPs in a community setting.

FROM: Doultree J, Druce J, Birch C, Bowden D, Marshall J. Inactivation of feline calicivirus, a Norwalk virus surrogate. *J Hosp Infect* 1999;41:51-57.

Monochloramine Disinfection of Drinking Water on Risk of Legionnaires' Disease

Many *Legionella* infections are acquired through inhalation or aspiration of drinking water. Although approximately 25% of municipalities in the United States use monochloramine for disinfection of drinking water, the effect of monochloramine on the occurrence of legionnaires' disease has never been studied. Kool and coinvestigators from the CDC used a case-control study to compare the disinfection methods for drinking water supplied to 32 hospitals that had outbreaks of legionnaires' disease and the disinfection method for water supplied to 48 control hospitals.

Hospitals supplied with drinking water containing free chlorine as a residual disinfectant were more likely to have a reported outbreak of legionnaires' disease than those that used water with monochloramine as a residual disinfectant. This result suggests that 90% of outbreaks associated with drinking water might not have occurred if monochloramine had been used instead of free chlorine for residual disinfection.

The authors suggest that the protective effect of monochloramine against *Legionella* should be confirmed by other studies. Chloramination of drinking water may be a cost-effective method for control of legionnaires' disease at the municipal level or in individual hospitals, and widespread implementation could prevent thousands of cases.

FROM: Kool JL, Carpenter JC, Fields BS. Effect of monochloramine disinfection of municipal drinking water on risk of nosocomial legionnaires' disease. *Lancet* 1999;353(9149):272-277.