Medical News

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HIV Postexposure Prophylaxis Recommended

The CDC and the National Foundation for Infectious Diseases sponsored a workshop to discuss postexposure management, including chemoprophylaxis and duration of postexposure follow-up after occupational exposure to HIV-infected blood. The meeting was held in Atlanta in March 1996 and was attended by approximately 80 persons from the United States and other parts of the world.

The Public Health Service's 1990 guidelines for postexposure prophylaxis (PEP) after occupational exposure to HIV did not make recommendations for or against the use of zidovudine (ZDV) because of the limited data available at that time regarding ZDV's safety and efficacy. Data were reviewed from the CDC's retrospective case-control study among healthcare workers, in which ZDV PEP was associated with a decrease in the risk of HIV seroconversion after percutaneous exposure to HIV-infected blood, and from a prospective trial in which ZDV treatment of HIV-infected pregnant women and their infants significantly reduced perinatal HIV transmission. Workshop participants also reviewed available information on efficacy, toxicity, and drug resistance of ZDV and other antiretroviral agents, including lamivudine (LAM) and indinavir for postexposure prophylaxis.

The consensus among the participants of the workshop was that chemoprophylaxis should be recommended for healthcare workers after certain occupational exposures to HIV. The decision to use PEP and the choice of agents used should be based on the risk of HIV infection due to the exposure, the risk of drug toxicity, and the probability that ZDV resistance is present. PEP should be initiated as soon as possible, preferably within 1 hour.

Based in part on information presented and discussed at the workshop, an interagency working group (CDC, Food and Drug Administration, Health Resources and Services Administration, and the National Institutes of Health) will be developing recommendations to update the previous 1990 "Guidelines for the Management of Occupational Exposures to HIV in Health Care Settings." When completed, these recommendations will be published in the *MMWR*.

Hemodialysis Hepatitis B Outbreaks

The April 12 *MMWR* expressed concern about the increase in hepatitis B virus (HBV) epidemics in hemodialysis centers, a healthcare setting that historically has done an admirable job of reducing the incidence of HBV infections among dialysis patients and staff. From April to August 1994, outbreaks occurred in five hemodialysis centers located in Texas, California, and Nebraska.

Results of the epidemiologic investigations revealed failures to comply with long-recommended infection control strategies for controlling HBV infection in hemodialysis centers. These failures included practices that did not allow for the identification of HBV-infected dialysis patients so that they could be dialyzed in a separate area using dedicated dialysis machines and staff; in some instances, staff, equipment, and supplies were shared among infected and susceptible patients. In one outbreak, contamination of a shared multiple-dose vial of heparin was considered the likely route of transmission. In addition, a substantial number of patients had not received HBV vaccine.

HBV is present in extraordinarily high titers in blood and other body fluids of infected patients ($\geq 10^9$ virus particles/mL). Because the virus survives well in the environment, blood-contaminated surfaces that are not routinely cleaned and disinfected represent a reservoir for transmission of HBV. Dialysis staff can transfer virus to patients from contaminated surfaces by their hands or through the use of contaminated equipment and supplies. Previous reports consistently have indicated that risk factors associated with HBV transmission among patients in hemodialysis centers include the presence of a patient with chronic HBV infection and failure to isolate such patients by room, machine, and staff. These reports also have indicated that physical separation of HBV-infected patients from susceptible patients substantially reduces the risk for HBV transmission.

In the hemodialysis setting, both Universal Precautions and the following hemodialysis-specific infection-control practices recommended in 1977 should be used: (1) all susceptible patients should have monthly hepatitis B surface antigen (HBsAg) testing; (2) HBsAg-positive patients should be isolated with respect to room, machine, instruments, medications, supplies, and staff; (3) instruments, medications, and supplies should never be shared; and (4) routine cleaning and disinfection procedures should be followed, including clear separation of areas established to handle clean and contaminated items.

The most effective strategy for reducing risk of HBV transmission is through HBV vaccination. Hepatitis B vaccination has been recommended for susceptible hemodialysis patients since it became available in 1982. However, by 1993, only 29% of hemodialysis patients in the United States had been vaccinated.

The cause for these lapses in infection control were not immediately evident, but clearly there was a lack of knowledge about infection control strategies that have been in place for almost 20 years and whose effectiveness in preventing HBV transmission is well known in the dialysis and infection control communities.

FROM: Centers for Disease Control and Prevention. Outbreaks of hepatitis B virus infection among hemodialysis patients—California, Nebraska, and Texas. *MMWR* 1996;45:285-289.

https://doi.org/10.1086/647326 Published online by Cambridge University Press