Medical News

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HICPAC Supports HCV Postexposure Follow-Up

Hepatitis C virus (HCV) poses a serious occupational risk to healthcare workers. The risk of seroconversion after percutaneous exposure to blood from anti-HCV–positive patients is approximately 3.5%. Virtually all people with acute HCV infection become chronically infected, and chronic liver disease develops in an average of 67% of those chronically infected. Postexposure prophylaxis with immune serum globulin is ineffective in preventing HCV.

A draft hepatitis report from the Centers for Disease Control and Prevention (CDC) concluded that "no recommendation can be made at this time for follow up of healthcare workers after occupational exposure to hepatitis C. The CDC's draft cites numerous issues that make a policy recommendation for postexposure follow-up problematic. These include limited data on the risk of transmission, limitations of available serologic testing for detecting infection and determining infectivity, lack of an effective postexposure prophylaxis, and the limited benefit of therapy.

CDC's Hospital Infection Control Practices Advisory Committee (HICPAC) reviewed the draft at a recent meeting and expressed concern over the lack of a specific recommendation regarding postexposure follow-up. HICPAC members felt that failure to make a formal recommendation would translate into inaction by many healthcare facilities. In addition, committee members pointed out that a stronger recommendation could be beneficial by learning more about the epidemiology of HCV.

In discussions at the HICPAC meeting, the CDC noted one of the major problems with postexposure follow-up is the limitation in testing methods. With the commercially available enzyme immunoassays that detect anti-HCV, there may be a prolonged interval between exposure and seroconversion. In many populations, including HCWs, the rate of anti-HCV false positivity is high. Approximately 10% of HCV infection will be undetected unless polymerase chain reation (PCR) is used to detect HCV RNA. However, PCR tests are not standardized and are primarily for research.

The greatest advantage from postexposure follow-up would be the opportunity for workers to seek evaluation and treatment for chronic liver disease. However, the current treatment, alpha interferon, is effective in fewer than 20% of those treated, and it is impossible to predict which patients will respond to treatment and sustain a long-term remission.

The Society for Healthcare Epidemiology of America (SHEA) also is working on a position paper regarding HCV and is leaning toward a recommendation for postexposure HCV testing of source patients following blood exposures to HCWs to provide additional information regarding occupational exposures.

The controversial issue of the HCV-positive HCW also was discussed in light of the first reported HCW-to-patient transmission of HCV. This outbreak occurred in Spain and involved five cardiac surgery patients with the same HCV genotype as the HCV-positive cardiac surgeon. It was agreed that the risk of HCW-to-patient transmission is not known, and a policy on the HCV-positive HCW would be difficult to develop because of the current limitations of testing and difficulties in determining infectiousness on an individual basis.

HICPAC's concerns are being considered by the CDC in a revision of the draft hepatitis document to be released in early 1996.

FROM: Centers for Disease Control and Prevention. Draft Hepatitis Surveillance Report, No. 56. Atlanta, GA: United States Public Health Service, Centers for Disease Control and Prevention.

Postexposure Zidovudine May Reduce HIV Risk

CDC recently reported the results of a retrospective case-control study to assess the risk factors for human immunodeficiency virus (HIV) infection after percutaneous exposure to HIV-infected blood. An increased risk of HIV infection was found to be associated with three factors. First, the risk increased if exposure involved a large quantity of blood, specifically, (1) a device visibly contaminated with the source patient's blood, (2) procedures involving a needle placed directly in a vein or artery, or (3) a deep injury. Second, the risk increased for exposures to blood from source patients with terminal illness, possibly reflecting the higher titer of HIV in blood late in the course of AIDS. Third, the data also suggested that the postexposure use of zidovudine (ZDV) may be protective for HCWs. After controlling for other risk factors associated with HIV transmission risk, the risk of HIV infection among HCWs who used ZDV was reduced by approximately 79%.

The CDC notes that there are a number of potential limitations of this study, such as the cases and controls being identified using different data sources, case reporting bias, and the small number (31) of cases.

Although failures of postexposure ZDV to prevent HIV infection in HCWs have been documented, this is the first study of HCWs exposed to HIV that assesses the effectiveness of ZDV as a postexposure prophylaxis. Studies involving animals have yielded inconclusive results. In studies involving humans, ZDV was reported to reduce the

https://doi.org/10.1017/S0195941700006330 Published online by Cambridge University Press

rate of perinatal HIV transmission and to be beneficial in treating early HIV infection. However, the implications of these results for postexposure prophylaxis are uncertain. The short-term toxicity of ZDV in HCWs primarily has been gastrointestinal discomfort and fatigue.

In 1990, the Public Health Service (PHS) concluded that a recommendation could not be made for or against the use of ZDV postexposure prophylaxis because of the limited knowledge regarding its efficacy and toxicity. PHS does recommend that HCWs who may be at risk for occupational exposure to HIV infection be informed of the considerations pertaining to the use of ZDV for postexposure prophylaxis, including the risk for HIV transmission after exposure, factors that influence the risk, and the limited knowledge that regarding the efficacy and toxicity of ZDV postexposure prophylaxis. PHS currently is evaluating the implications of this study in assessing the possible need for revision of its recommendation for managing occupational exposure to HIV, particularly regarding postexposure use of antiretroviral agents.

FROM: Centers for Disease Control and Prevention. Case-control study of HIV seroconversion in healthcare workers after percutaneous exposure to HIV-infected blood—France, United Kingdom, and the United States, January 1988 to August 1994. *MMWR* 1995;44(50):929-933.

Adults Often Source of Pertussis

Although pertussis in adults has been well documented, opinions have differed on the incidence of adult disease and the role of adults as reservoirs of infection. Researchers from the Institute for Hygiene and Laboratory Medicine in Munich, Germany, recently reported the results of a prospective household contact study of an acellular pertussis vaccine to collect data on pertussis in adults.

All members of families with an index case of pertussis were monitored for respiratory symptoms, and pertussis was confirmed by laboratory tests. In 122 households, 104 children (85%) and 18 adults (15%) were the source of pertussis. These households consisted of 265 adults (aged 19 to 83 years), in 84 of whom pertussis was confirmed. Of these 84, 81% had respiratory symptoms for 21 days or more. The spread of pertussis was independent of whether the index case was a child or an adult. The overall attack rate in adult contacts was 26% and was independent of the social status and size of the family. Patients whose first pertussis episode dated back more than 20 years had similar symptoms and attack rates to patients without any pertussis history.

Their finding that 15% of the index cases of the family were adults is similar to data from outbreaks of pertussis in the United States. The authors conclude that, in this study region and probably other areas endemic for pertussis, adults often are involved in the spread of pertussis in households, and the frequency of atypical, nonidentified cases may be higher than expected. Finally, although patients with a pertussis history only rarely were index cases, adults seem susceptible to reinfection 20 years after a first pertussis episode.

FROM: Wirsing von Konig CH, Postels-Multani S, Block HL, Schmitt HJ. Pertussis in adults: frequency of transmission after household exposure. *Lancet* 1995; 346:1326-1329.

OSHA Clarifies Position on Recapping of Needles

A recent memorandum from Occupational Safety and Health Administration's (OSHA) Director of Health Compliance Assistance, Ruth McCully, clarified OSHA's position regarding needle recapping. A rumor circulating through the healthcare industry concerned a HCW who worked in a midwest hospital that was cited by OSHA for having recapped needles in the disposal box. Apparently, as the rumor goes, to avoid a possible citation, the HCW recapped a contaminated needle, carried it to the sharps box, and then uncapped the needle before placing it in the needle disposal box. The HCW sustained a needlestick injury and subsequently HIV seroconverted.

OSHA states that the origin of this rumor is unclear and that a search of inspections over the past several years did not reveal any citation related to capped needles in needle boxes. OSHA clarified their position that "contaminated needles and other contaminated sharps should not be recapped." However, if recapping of contamination sharps is necessary, it "must be accomplished through the use of a mechanical device or a one-handed technique." Thus, there frequently might be capped needles in the disposal boxes. OSHA administrators have confirmed that OSHA does not inspect the contents of needle boxes and does not issue citations when needles are found to be recapped.

Questions on this topic can be directed to Richard Fairfax, (202) 219-8036, in OSHA's Office of Health Compliance Assistance.

FROM: Occupational Safety and Health Administration. Memorandum to regional administrators: occupational transmission due to needle recapping. October 20, 1995.

Flu Epidemic in Russia Hits Millions

The worst influenza epidemic in decades has hit Russia and the Ukraine, with as many as 200,000 new cases reported each day. Nearly 1 million people already have been infected in Moscow and almost 2 million in the Ukraine.

Local health officials postulated that the rapid spread of influenza was related to recent social changes and deterioration of the health system. For example, the Russian budget now provides only a fraction of previous funding for preventive medicine. Poverty also is rampant, particularly in large cities. There is no organized system to administer vaccine, and there is a widespread belief that the injection may be worse than the illness, in part due to the reprocessing and reuse of needles.

The CDC has noted that the influenza virus spreading across Russia does not appear to match the strains causing

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