Medical News

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Guidelines Issued for Vancomycin-Resistant Staphylococcal Infection

In the July 11, 1997, issue of the *Morbidity and Mortality Weekly Report,* the CDC summarized the first documented case of infection caused by *Staphylococcus aureus* with reduced susceptibility to vancomycin. The strain was isolated from a surgical-site infection in a pediatric patient in Japan.[1] Although no such cases have been reported in the United States, its appearance increases the likelihood that fully resistant strains may emerge.

Because the occurrence of fully vancomycin-resistant staphylococcal infection could result in serious public health consequences, the CDC and the Hospital Infection Control Practices Advisory Committee (HICPAC) have issued interim guidelines to direct medical and public health responses when isolates of staphylococci with reduced vancomycin susceptibility are identified.[2] The guidelines include steps to (1) decrease the likelihood that staphylococci with reduced susceptibility will emerge (eg, restriction of vancomycin use); (2) detect staphylococci with reduced susceptibility of vancomycin; (3) obtain information from the FDA's Division of Anti-Infective Drug Products (301-827-2120) about investigational antimicrobials for treating patients infected with either fully or intermediately vancomycin-resistant staphylococci for whom conventional therapy fails; and (4) implement interim infection control measures (eg, private isolation room with contact precautions, use of antimicrobial soap for hand washing, and cohorting (or use of dedicated healthcare workers) to provide one-on-one care to colonized or infected patients.

The state health department and the CDC's Hospital Infections Program (404-639-6400) should be contacted following a presumptive identification of a staphylococcal strain with reduced susceptibility to vancomycin.

FROM: 1. Centers for Disease Control and Prevention. Reduced susceptibility of *Staphylococcus aureus* to vancomycin—Japan, 1996. *MMWR* 1997;46:624-626.

2. Centers for Disease Control and Prevention. Interim guidelines for prevention and control of staphylococcal infection associated with reduced susceptibility to vancomycin. *MMWR* 1997;46:626-628,635.

Antibiotic Resistance Surveillance

Ron Jones, University of Iowa, and Jan Verhoef, University of Utrecht in The Netherlands, have announced a new program consisting of a network of 72 hospitals around the world for standardizing monitoring and testing of antibiotic resistance in bacteria. The Iowa group has data on their assessment of resistance of more than 10,000 bacterial samples from hospitalized patients with bloodstream, urinary tract, and wound infections in the United States, Canada, and South America. In addition to the initial 72 hospitals, 100 more in Australia, Africa, the Middle East, and Asia are expected to join the program next year. The program is funded for the next 3 to 5 years by Bristol-Myers Squibb Co, which will use the data and the isolates for developing more effective antibiotics.

FROM: Holden C. Antimicrobial spy network. *Science* 1997;227:185.

HCV Transmission During Home Infusion Therapy

The CDC recently reported a case of hepatitis C virus (HCV) infection in a child with hemophilia believed to be transmitted from mother to child through percutaneous exposure to the mother's HCV-infected blood during home infusion of clotting-factor concentrate. In September 1996, a 4-year-old child with moderate factor VIII deficiency was found to have antibody to HCV (anti-HCV) after testing negative in June 1994 and August 1995. The child had received recombinant clotting-factor concentrate for the treatment of bleeding episodes. Three of the six serum samples from household members were anti-HCV positive, including the mother, an aunt who had stayed in the household for 6 weeks during September to October 1995, and an 11-year-old sibling who had a moderate factor VII deficiency and was anti-HCV positive when first tested in 1992. Both the mother and aunt had histories of having injected illicit drugs.

The patient's mother had administered clotting-factor concentrate to the patient at home and reported that the child was often combative and resistant during infusion and required three other persons to restrain him. The mother also recalled that, on at least two occasions, she pricked her finger while attempting an infusion and drew a visible quantity of blood and could not remember whether she continued to use the same needle for the infusion; she did not use gloves. No other family members assisted in the infusion. Sequence analysis of the HCV strains of the child and the HCV-infected family members indicated that the strain isolated from the mother and child were identical. Viral sequences isolated from the aunt and brother differed by 4 and 10 nucleotides from the child's strain.

The CDC noted that, among persons with hemophilia who were heavily infused with clotting-factor concentrates before the development of viral inactivation methods, the prevalence of anti-HCV exceeds 90%. Transmission of HCV and other viral agents has not been reported associated

with receipt of genetically engineered factor concentrates or of albumin, the only human plasma-derived material present in these recombinant products. The child in this report had received only recombinant product during the period in which infection was likely to have been acquired.

HIV infection has been acquired through percutaneous exposure during home treatment of patients with AIDS and hemophilia. The report highlights the need for proper infection control procedures to reduce risk of bloodborne pathogen transmission during home infusion therapy.

FROM: CDC. Transmission of hepatitis C virus infection associated with home infusion therapy for hemophilia. *MMWR* 1997;46:597-599.

HIV Transmission From Deep Kissing?

Investigators from the CDC recently reported a case of HIV transmission from an HIV-infected man to his uninfected female sexual partner. They were enrolled in a study for couples with one HIV-infected partner and one noninfected partner and were counseled extensively and tested periodically for HIV. Information was obtained separately from each partner by two independent interviews during the investigation and from study records before they were aware of HIV transmission. The couple reported using latex condoms during sex, usually with the spermicide nonoxynol-9. Neither reported condom breakage or slippage during the time period that transmission likely occurred, and both denied having had anal sex. The couple did engage in deep kissing (open mouth to open mouth). The man indicated that his gums frequently bled after he brushed and flossed his teeth at night before they engaged in sexual intercourse and deep kissing. The man had been infected since 1988 as a result of injecting drugs, and he reported long-standing poor dentition and occasional sores in his mouth. The woman underwent dental evaluation in August 1994 and was diagnosed with periodontitis with inflamed gingival mucosa. The dentist was negative for HIV.

Although the exact route of transmission cannot be determined after an epidemiological investigation, the most likely possibility is that the woman became infected through oral mucous membrane exposure to the man's saliva, which was contaminated by blood from his bleeding gums, or by exudate from undetected oral lesions. Exposure to saliva uncontaminated with blood is considered to be a rare mode of HIV transmission for a number of reasons, including the following: (1) saliva inhibits HIV infectivity; (2) HIV is isolated infrequently from saliva; (3) none of the approximately 500,000 cases of AIDS reported to the CDC have been attributed to exposure to saliva; (4) levels of HIV are low in saliva of HIV-infected persons, even in the presence of periodontal disease; and (5) transmission of HIV in association with kissing has not been documented in studies of nonsexual household contacts of HIV-infected persons.

Other routes of exposure to the man's semen or blood cannot be excluded definitely, including vaginal intercourse (both partners reported consistent condom use) and sharing toothbrushes or razors (the woman reported that shared use of these items occurred only once).

FROM: Centers for Disease Control and Prevention. Transmission of HIV possibly associated with exposure of mucous membrane to contaminated blood. *MMWR* 1997;46:620-623.

Russia to Open New TB Center

Two new laboratories are scheduled to be built in Moscow to study tuberculosis and hospital-acquired infections. Funding for these laboratories came from a donation of $3 million by philanthropist George Soros. The funds will be administered by the nonprofit Public Health Research Institute (PHRI) located in New York City and are intended to increase Russia's capability to deal with these infectious diseases.

Since the Soviet Union dissolved in 1991, Russia's medical community has not been able to control the rise of TB, diphtheria, and other infectious diseases adequately. The annual number of new TB cases reportedly has increased by 42% from 1991 to 1994; the death rate, 87%. The tuberculosis laboratory will be located at the Central Institute of Lung Disease in Moscow and the hospital-acquired infections laboratory at the First Moscow Medical Academy. If PHRI can raise another $5 million, Soros will match it with $2 million more. PHRI emphasizes that more funds will be needed and points out that New York City has spent nearly $1 billion in the past few years to upgrade its facilities for fighting TB's resurgence, even though New York was much better equipped at the start than is Moscow.

FROM: Holden C. Russia to get new TB center. *Science* 1997;227:185.

Additional news items in this issue: Microbiological Factors and Mortality of Septicemia, page 621; Check Out These Web Sites, page 632; The HIV Postexposure Prophylaxis Registry, page 636.