Medical News

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Delays in Identification of *M tuberculosis*

The CDC recently reported the mycobacteriology laboratory practices of 2,862 laboratories that are enrolled in federally approved proficiency testing (PT) programs. Enrollment in these PT programs is required by the 1988 Clinical Laboratory Improvement Amendments (CLIA).

Of the 2,862 laboratories, 2,179 reported performing primary culture for *Mycobacterium tuberculosis* (TB). Of these, 1,166 (54%) referred any AFB-positive isolates to another laboratory for identification and drug-susceptibility testing, 699 (32%) performed primary culture with identification, and 314 (14%) performed primary culture, identification, and drug susceptibility testing.

Rapid laboratory testing to identify and determine drug susceptibility of *M tuberculosis* isolates is vital to effective diagnosis, treatment, and control of TB in the community. The CDC noted that organism identifications and drug-susceptibility determinations may be delayed for a substantial proportion of TB cases, because at least 54% of laboratories referred AFB isolates to another laboratory for complete analysis.

Although solid and liquid media together are recommended for cultures of *M tuberculosis*, the liquid-culture method is needed to detect and isolate the organism. In addition, liquid-culture methods increase the sensitivity of culture for *M tuberculosis.* A 1992 CDC survey of 749 laboratories indicated that only 97 (13%) were using the recommended liquid-culture method. The exclusive use of solid-medium culture methods delays isolation of *M tuberculosis* by an average of 7 to 10 days. The CDC recommends that laboratories should select culture tests that provide rapid identification of *M tuberculosis* and drug-susceptibility test results, to enable early confirmation of the diagnosis and initiation of infection control measures and case-finding. Laboratories that perform only primary cultures should determine whether referral of the patient specimens, rather than the culture isolates, may decrease the time required for identification and drug-susceptibility testing.

FROM: Centers for Disease Control and Prevention. Laboratory practices for diagnosis of tuberculosis. *MMWR* 1995;44(31):587-590.

Two Cases of HIV-2 Detected Among Blood Donors in US

Since the implementation of HIV-2 screening for all donated blood 3 years ago, two cases of HIV-2 infection have been identified.

In June 1994, a blood donation was discarded after it tested positive in a combination HIV-1/HIV-2 enzyme immunoassay (EIA) and indeterminate in a HIV-1 Western blot (WB) assay. The donor was born and resided in the United States and denied use of injection drugs, receipt of transfusion, and any travel outside the United States.

The second donation was serum and was rejected in November 1994 after it tested positive by combination HIV/HIV-2 EIA and an HIV-2 WB for research use only. This second donor was born in France and had lived in western Africa during 1979 and 1985 before moving to the United States. While in western Africa he was vaccinated on two occasions with needles that were wiped with cotton and reused between patients. He also received several tattoos in Africa and estimated 35 lifetime sex partners, most of whom were African.

In the United States, as of June 30, 1995, a total of 62 persons were reported with HIV-2 infection; 38 (66%) of 58 were male. At least 11 of the 62 had an AIDS-defining condition at the time of the report. Of these 62 persons, 42 (68%) were born in western Africa and two in Europe. Of the nine persons with HIV-2 infection born in the United States, six were adults, of whom four had either traveled to or had a sex partner from western Africa, and three were children born to mothers of unknown national origin.

In the US, HIV-2 infection among blood donors is extremely rare. Since the implementation of combination HIV-1/HIV-2 EIA screening of blood and plasma donations, an estimated 74 million donations have been tested for HIV. Including the two cases described here, three cases of HIV-2 infection have been detected among blood and plasma donors in the US. The first case was detected by HIV-1 screening in 1986.

FROM: Centers for Disease Control and Prevention. Update: HIV-2 infection among blood and plasma donors—United States, June 1992-June 1995. *MMWR* 1995:44(32):603-606.

ACIP Expands Hepatitis B Recommendations

The Advisory Committee on Immunization Practices (ACIP) recently revised their recommendations for protection against viral hepatitis.[1] The revision includes expansion of the vaccine strategy to eliminate hepatitis B virus (HBV) transmission in the United States to include vacci-

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nation of children and adolescents in high-risk populations.[2] The expanded recommendations include vaccination of all unvaccinated children age <11 years who are Pacific Islanders or who reside in households of first-generation immigrants from countries where HBV is of high or intermediate endemicity and vaccination of all 11- to 12-year-old children who have not been vaccinated previously.[2]

In November 1991, the ACIP recommended that hepatitis B vaccine be integrated into infant vaccination schedules. However, high rates of HBV infection continue to occur among children age 0 to 10 years who are Alaskan Natives, Pacific Islanders, and infants of first-generation immigrant mothers from areas of high or intermediate HBV endemicity. Among children in these populations, the prevalence of chronic HBV infection ranges from 2% to 5%, and infection rates average 2% per year. Because these infections account for a large proportion of chronic HBV infections that occur each year in the United States, special efforts should be made to ensure hepatitis B vaccination of these populations.

Routine infant hepatitis B vaccination is the most effective means to prevent HBV transmission in the United States. The effect of routine infant vaccination on acute disease may not be apparent for 20 to 30 years, because most infections currently occur among young adults. Thus, ACIP also is recommending vaccination of previously unvaccinated children at age 11 to 12 years in order to have a more rapid decline in the incidence of HBV infection. The ACIP has recommended that hepatitis B vaccination of adolescents be performed as part of a routine adolescent vaccination visit at age 11 to 12 years. This visit should be used to ensure that all adolescents have received three doses of hepatitis B vaccine, two doses of measles-mumps-rubella vaccine, and a booster dose of tetanus and diptheria toxoids, as well as to assess whether adolescents are immune to varicella.

The full text of the revised ACIP recommendations for protection against viral hepatitis will be published in an upcoming issue of the *Morbidity and Mortality Weekly Report.*

REFERENCES

1. Centers for Disease Control and Prevention. Protection against viral hepatitis: recommendations of the Immunization Practices Advisory Committee (ACIP) *MMWR* 1990;39(No. RR-2).
2. Centers for Disease Control and Prevention. Update: recommendations to prevent hepatitis B transmission—United States. *MMWR* 1995;44(30):574-575.

Topical Microbicides to Prevent STD

The National Institute of Allergy and Infectious Disease (NIAID), National Institutes of Health, recently announced three new research projects on topical microbicides to prevent sexually transmitted diseases (STD) in women. Topical microbicides can be used by women before sexual intercourse to reduce the risk of acquiring an STD. The NIAID will award a first-year total of $1.5 million to research teams in Los Angeles, Chicago, and Pittsburgh. The teams will answer a number of research questions, such as the potential effects of microbicides on pathogens that cause HIV, gonorrhea, genital herpes, and trichomoniasis.

According to Penny J. Hitchcock, DVM, coordinator of the NIAID projects, "an ideal microbicide would not be inherently spermicidal, but could be formulated with or without spermicidal activity. For example, noncontraceptive microbicides would be useful for women who wish to become pregnant. However, they still need to be protected from HIV infection and other STDs."

An STD is acquired by an estimated 12 million Americans each year—a disproportionate number of whom are women. HIV is now the fourth leading cause of death among women age 25 to 44 in the United States and is a leading killer of women worldwide. Gonorrhea and chlamydial infections cause pelvic inflammatory disease, infertility, and ectopic pregnancy. Genital infections due to papillomavirus are associated with cervical cancer, one of the most common cancers in the world. Infections in newborns include syphilis, herpes, gonococcal conjunctivitis leading to blindness, and chlamydial pneumonia.

FROM: National Institute of Health. NIAID expands research on topical microbicides to prevent STDs in women. Press release, April 27, 1995.

Additional news items in this issue: New TB Respirators Expected to Save Millions, page 555; Guidelines for Prevention of Intravascular Device-Related Infection, page 569; HICPAC Guidelines, page 576; Congress's Office of Technology Assessment Will Close, page 581; VRE Common, page 599; Court Rejects HIV-Positive Surgical Technician, page 606; PHS Guidelines for Prevention of Opportunistic Infections, page 611.