Medical News

EDITED BY GINA PUGLIESE, RN, MS

New Test for Rapid Diagnosis of IV Catheter-Related Sepsis

A method has been identified that may be useful for rapid detection of infection of central venous catheters while they are in place. Dr. J.A. Rushforth et al evaluated 51 patients with suspected central venous catheter sepsis. Seventy-three catheters were studied: 19 Broviac and 54 silastic percutaneous catheters (0.6 mm). Paired peripheral and central venous blood samples were inoculated directly onto solid media. Catheter-related sepsis was deemed to be present if blood from both sources was culture-positive with the same organism and the number of colony forming units was at least five times greater in the central than in the peripheral specimen.

In addition, 50 μL of central venous blood was lysed and centrifuged, and slides were prepared and stained with acridine orange and examined by ultraviolet microscopy. The presence of any bacteria was considered a positive test, and a duplicate slide was gram stained.

Catheter-related sepsis was confirmed in 31 cases among 95 suspected episodes in the 51 patients. Twenty cases were due to coagulase-negative staphylococci, while the rest were due to ***Enterococcus faecalis*** and *Klebsiella* species.

The acridine orange leukocyte cytospin test was negative in 60 of 64 instances in which catheter-related sepsis was absent and positive in 27 of 31 in whom it was present. The sensitivity was 87%, specificity 94%, positive predictive value 94%, and negative predictive value 92%.

FROM: Rushforth JA et al. Rapid diagnosis of central venous catheter sepsis. *Lancet* 1993;342:402-***403.***

OSHA Fines Employers $1.3 Million Under Bloodborne Standard

Between March 1, 1992, and February 28, 1993, the federal Occupational Safety and Health Administration (OSHA) conducted more than 1,000 inspections of worksites where employees are at risk for occupational exposure to bloodborne pathogens, including hospitals, physician and dental offices, home health agencies, nursing home facilities, laboratories, and funeral homes. More than 1,700 violations were cited, with $1.3 million in total penalties.

More than half of the inspections were prompted by complaints from employees. The most common violations were 1) not communicating hazards to employees (200 violations); 2) failure to vaccinate occupationally exposed workers and provide appropriate medical evaluations and follow-up (184 violations); 3) housekeeping infractions, including improper containment of regulated waste, inaccessible sharps containers, and contaminated worksites (158 violations); 4) lack of provision, inaccessibility, and improper use of appropriate personal protective equipment (140 violations); and 5) failure to use engineering controls and safe work practices, including unnecessary recapping of needles and failure to use mechanical devices for recapping or needle removal (78 violations).

Bloodborne Pathogen Standard violations represent approximately 20% of the total citations issued by OSHA. Twenty-seven percent were for violations related to the hazardous materials standard, and 28% were for lack of compliance with the ethylene oxide and formaldehyde standards.

David Satcher Appointed Director of CDC

President Clinton announced the appointment of Dr. David Satcher as Director of the Centers for Disease Control and Prevention (CDC), replacing Dr. William Roper. Satcher, a family physician, has been president of Meharry Medical College in Nashville, Tennessee, since 1982. The appointment, effective January 1, 1994, will make Dr. Satcher the first African-American director of the government's main public health agency.

Dr. Satcher is best known as the architect of a controversial plan that merged Meharry's Hubbard Hospital with Nashville's Metropolitan General Hospital. The 1992 merger allows Meharry to take over indigent care for the city at Hubbard Hospital, thus strengthening the school's patient base. Dr. Satcher said, "I would like to think that in five years the CDC will be looked at as exemplary in terms of its management. I want people to view CDC as a major force in the country in terms of prevention, making a difference in what is happening to our children, and making an impact on AIDS [acquired immunodeficiency syndrome]. Public health is being challenged as never before, and I want to be part of the struggle."

With an annual budget of $2.2 billion and more than 7,000 employees, the Atlanta-based CDC is one of eight public health service agencies within the U.S.

Department of Health and Human Services.

HIV-Infected Scientist Claims AIDS Vaccine Does Not Work

A French scientist going by the pseudonym of Philip Bertrand said that a prototype of a vaccine that is about to undergo human testing in the U.S. failed to halt the progression of his human immunodeficiency virus (HIV) infection. While conducting research in Africa, Bertrand claims he received the vaccine one week after he was infected with HIV when he accidentally cut himself on a glass tube that contained HIV. Bertrand said the vaccine was being developed under the direction of National Institutes of Health (NIH) researcher Dr. Robert Gallo and was sent to French scientist Dr. Daniel Zagury in Zaire for human testing. Bertrand charges that Gallo and Zagury knowingly omitted relevant facts about the vaccine's performance from a journal article they published concerning the efficacy of the vaccine in humans. Specifically, the article did not reveal that Bertrand had been infected with HIV before receiving the vaccine or that antibodies found in Bertrand's cells could be a result of contact with HIV rather than the vaccine.

A similar vaccine has been approved for human testing in the United States. Drs. Gallo and Zagury and an NIH spokesperson declined to comment.

FROM: ***Chicago Tribune.*** September 5, 1993.

CDC Offers Guidance on Drug-Resistant TB

The spread of drug-resistant tuberculosis (TB) has prompted the CDC to issue new treatment recommendations to curb further transmission. In a special report, the CDC advises the use of a four-drug regimen of isoniazid, rifampin, pyrazinamide, and either streptomycin or ethambutol for the initial empiric treatment of TB. The agency also says that directly observed therapy (DOT) should be considered for all TB patients because failure to take a full course of medication is the major factor in development of drug resistance. Critics of the new CDC guidelines say that DOT should be mandated, not "considered."

The new recommendations also call for in vitro drug susceptibility testing on the first isolate of *Mycobacterium tuberculosis* in all patients with TB to provide the basis for clinical therapeutic decisions, reporting the results to public health authorities. In addition, drug susceptibility testing will be important for identifying emerging drug resistance and helping to monitor control efforts in areas where resistance already is established.

'The new four-drug regimen and susceptibility testing go hand-in-hand," said Larry Geiter, chief of clinical research in the CDC's Tuberculosis Elimination Division. 'These new guidelines add a fourth drug to the previously recommended three-drug regimen. Pyrazinamide previously had been added to the TB drugs of choice, isoniazid and rifampin. Pyrazinamide allowed us to cut back to a six-month regimen, as opposed to nine months, and cuts the relapse rate to below 5%."

A four-drug regimen can be administered intermittently instead of daily. It is effective when given three times a week from the beginning of therapy or twice a week following an initial two-week phase of daily therapy. Clinicians should consider the three-drug regimen acceptable only in areas where isoniazid resistance is less than 4%.

Announcement of this recommendation also coincides with the renewed manufacture of streptomycin in the United States. After a two-year absence due to sterility problems in bulk supplies from a foreign manufacturer, Pfizer Pharmaceuticals Inc was to resume domestic production on July 6, 1993.

Drug resistance has added a chilling dimension to the recent resurgence of TB. In New York City, for example, 33% of TB cases were resistant to at least one drug, and 19% were resistant to both isoniazid (INH) and rifampin (RIF). Among recurrent cases of TB nationwide, 6.9% were resistant to both INH and RIF in 1991, compared with 3% during the period 1982 to 1986, according to the CDC.

These recommendations update previous CDC and American Thoracic Society recommendations for treatment of TB.

FROM: Centers for Disease Control and Prevention. Initial therapy for tuberculosis in the era of multidrug resistance: recommendations of the Advisory Council for the Elimination of Tuberculosis. ***MMWR*** 1993;42 (RR-7) :l-8.

Joint Commission to Make Hospital Performance Information Available to Public

Starting next year, the Joint Commission on Accreditation of Healthcare Organizations for the first time will release information to the public detailing how hospitals meet specific performance standards. Joint Commission President Dr. Dennis O'Leary says, 'This is a landmark issue for us, and it is very much in line with the reform environment. The change in the Joint Commission's confidentiality and disclosure policy, approved recently by the commission's board, recognizes the accrediting agency's obligation to share information with patients, purchasers, and other stakeholders in healthcare delivery systems."

Under the new policy, standards-compliance rat-