

Departures from therapeutic recommendations as defined by the Centers for Disease Control and Prevention, the American Thoracic Society, and the American College of Chest Physicians were considered errors in care. Management errors were detected in 28 (80%) of the 35 patients, and there was an average of 3.93 errors per patient.

The most common errors included the addition of a single drug to a failing regime, the administration of an inadequate primary regime, failure to recognize primary or acquired drug resistance, failure to recognize and deal with patient noncompliance, and inappropriate preventive therapy.

The patients in whom management errors were made had a longer hospital stay and were treated with more total medications than those in whom no errors were detected. Seventeen surgical resections were performed for the management of tuberculosis. All were performed in patients who had management errors.

Acquired drug resistance occurred in 18 (86%) of 21 patients subject to treatment errors and only one (14%) of those without treatment error. Only two treatment failures occurred, both in the error group.

The authors concluded that the "pitfalls in the care of tuberculosis patients are multiple and common; these errors lead to the development of multidrug-resistant isolates, the loss of efficacy of the most potent antituberculosis antibiotics, prolonged hospital stays and tremendous expenditures from the limited and precious healthcare budget."

FROM: Mahmoudi A, Iseman MD. Pitfalls in the care of patients with tuberculosis. Common errors and their association with the acquisition of drug resistance. *JAMA* 1993;270:65-68.

CDC Revises Recommendations for Infection Control in Dentistry

The CDC recently issued "Recommended Infection Control Practices for Dentistry, 1993." These guidelines update previously published CDC recommendations for infection control practices in dentistry to reflect new data, materials, technology, and equipment. These guidelines are intended to reduce risk of disease transmission in the dental environment from patient to dental healthcare worker (DHCW), from DHCW to patient, and from patient to patient. The recommendations include a call for routine use between patients of a heating process capable of sterilization (ie, steam under pressure [autoclaving], dry heat, or heat/chemical vapor) for all high-speed dental handpieces, low-speed handpiece components used intraorally, and reusable prophylaxis angles. Surface disinfection of these items by wiping or soaking in liquid chemical germicide is not an acceptable method for reprocessing.

FROM: Recommended Infection Control Practices

for Dentistry, 1993. *MMWR* (Reports and Recommendations RR8):42:1-12; May 28, 1993.

CDC Finds a Dramatic Increase in Nosocomial Vancomycin-Resistant Enterococci

As part of continual surveillance for antibiotic resistance among pathogens associated with nosocomial infections, a recent analysis of data from the Centers for Disease Control and Prevention's National Nosocomial Infections Surveillance (NNIS) System demonstrated a 20-fold increase from January 1, 1989, through March 31, 1993, in the percentage of enterococci associated with nosocomial infections resistant to vancomycin. Many of these strains are resistant to all available antimicrobial agents. The percentage of nosocomial enterococci resistant to vancomycin increased from 0.3% in 1989 to 7.9% in 1993. Among patients in intensive care units (ICUs) with nosocomial infections, the percentage of enterococcal isolates resistant to vancomycin increased from 0.4% in 1989 to 13.6% in 1993.

Vancomycin-resistant nosocomial enterococci have been reported from nine of 33 states with NNIS hospitals; the highest percentages were from NNIS hospitals in New York, Pennsylvania, and Maryland (8.9%, 5.6%, and 3.6% respectively).

Vancomycin resistance represents a serious challenge for physicians treating patients with bacterial infections, particularly because many hospital-acquired *Enterococcus faecium* strains also are resistant to beta-lactams and aminoglycoside antibiotics. Treatment options for patients with nosocomial infections associated with vancomycin-resistant enterococci often are limited to unproven combinations of antimicrobials or experimental compounds.

Control measures for vancomycin-resistant enterococci include more consistent application of infection control precautions and control of indiscriminate vancomycin use.

FROM: Nosocomial enterococci resistant to vancomycin-United States, 1989-1993. *MMWR* 1993;42:597-599.

New CDC Voice/FAX Service Available for Immunization Information

The CDC and the National Immunization Program (formerly the CDC Division of Immunization, National Center for Prevention Services) have implemented a 24-hour, seven-days-a-week, automated FAX and voice