

Medical News

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Burkholderia cepacia in Patients With Cystic Fibrosis

The gram-negative organism *Burkholderia cepacia* is an important pathogen in patients with cystic fibrosis (CF), but it is seen infrequently in non-CF patients. Holmes, of Boston School of Medicine, and colleagues reported a large outbreak of *B. cepacia* in a hospital that appeared to involve both patient groups, a previously unrecognized phenomenon.

The outbreak occurred at a hospital in Mississippi where, investigators say, 268 patients were infected. Of that total, 23 patients had CF and 245 did not. A single dominant clone in both CF and non-CF patients was found. Phylogenetic studies showed that the organism evolved independently, and the authors say it appears that highly transmissible strains such as this one can emerge rapidly and randomly.

Non-CF patients who acquired *B. cepacia* usually cleared the infection after they left the ICU, but the infection persisted in patients with CF. The risk of patients with CF acquiring the infection was linked to hospitalization and was associated with significantly increased mortality rates.

The authors stress that infection control policies should now take into account the possibility of nosocomial transmission of *B. cepacia* between CF patients and non-CF patients.

FROM: Holmes A, Nolan R, Taylor R, Finley R, Riley M, Jiang RZ, et al. An epidemic of *Burkholderia cepacia* transmitted between patients with and without cystic fibrosis. *J Infect Dis* 1999;179:1197-1205.

Control of HCV Spread in Hemodialysis Centers

A number of studies have shown that hemodialysis patients are at risk for hepatitis C virus (HCV) infection, and a strict relationship is clear between anti-HCV positivity and dialysis age or hospital dialysis, irrespective of previous blood transfusions. However, the precise mechanism of HCV nosocomial nontransfusional transmission among hemodialysis patients is not clear. Some investigators have recommended HCV patients be isolated like hepatitis B virus-infected patients.

Since isolation is a very expensive policy, Cerrai and coinvestigators from the Nephrology and Dialysis Unit, SMA Hospital, Florence, Italy, conducted a study to evaluate whether simpler measures, such as the observance of the Universal Precautions (UP) and the use of anti-HCV-

positive patient-dedicated monitors, could stop transmission of HCV infection in a hospital hemodialysis center. From January 1990 to December 1991 (first phase), the patients shared the monitors irrespective of their serological status for HCV, and training of the dialysis care staff was not performed with regard to UP. From January 1991 to June 1996 (second phase), according to UP, strictly personal dialysis tools were used for all patients, anti-HCV-positive patients were assigned to dedicated monitors in defined (not separated) areas of the dialysis rooms, and the dialysis care staff was trained to perform UP strictly.

In the first phase of the follow-up, five seroconversions occurred; none occurred in the second one. The authors conclude that isolation is not required for HCV-infected patients. They believe that measures such as the application of UP, dedicated machines, and continuous training of the care staff, instead of the isolation of positive patients, result in the same efficacy in preventing transmission of HCV and are cheaper than isolation of positive patients.

FROM: Cerrai T, Michelassi S, Ierpi C, Toti G, Zignego AL, Lombardi M. Universal Precautions and dedicated machines as cheap and effective measures to control HCV spread. *EDNTNA ERCA J* 1998;24:43-45,48.

Restricting Hospital Formulary to Control Antimicrobial Resistance

Approximately 7 years ago, researchers from the VA Medical Center in Brooklyn, New York, instituted infection control measures to thwart the spread of vancomycin-resistant enterococci. When that failed to work, they decided to try to control the outbreak by making changes in the hospital formulary. The main changes they instituted were an emphasis in the use of β -lactam and β -lactamase-inhibitor drugs and restrictions in the use of third-generation cephalosporins, vancomycin, and clindamycin. Those changes were successful in limiting the spread of vancomycin-resistant enterococci and *Clostridium difficile*, and those results have been previously published.

In a recent report, the same researchers tracked the effects of the formulary changes on other nosocomial pathogens. They report an approximate 22% monthly reduction in patients with methicillin-resistant *Staphylococcus aureus* and a 35% reduction in patients with ceftazidime-resistant *Klebsiella pneumoniae*. However, they also saw nearly a doubling of patients with positive cultures for cefotaxime-resistant *Acinetobacter* organisms.