Bulletins

Editor Sought

We are contemplating inaugurating a section on Information Management. If you would be interested in serving as Section Editor, please forward a letter describing your relevant background and your thoughts for such a section to the Editor, Dr. Michael Decker, Vanderbilt University School of Medicine, A-1116 Medical Center North, Nashville, TN 37232-2637.

VRE Common

by Gina Pugliese, RN, MS
Medical News Editor

Researchers from the University of Maryland School of Medicine, the Baltimore Veterans Administration Hospital, and the CDC recently reported the results of studies conducted in a university hospital setting to determine the distribution and risk factors for colonization and infection with vancomycin-resistant enterococci (VRE) and the effectiveness of specific interventions.

From May 1992 to June 1994, 75 active VRE infections were identified. Thirty-one (41%) of the patients had bloodstream infections, and 6 (8%) died. The incidence of active infection was highest in the organ transplantation unit (13.2 infections per 1,000 admissions). In point-prevalence studies, VRE were isolated from 20% of a random sample of stool cultures of hospitalized patients. No VRE were isolated from health community volunteers. Case-control studies showed significant associations between colonization and infection and (1) receipt of antimicrobial agents, particularly vancomycin, and (2) severity of illness. Although several small case clusters had isolates with identical banding patterns on pulsed-field gel electrophoresis, at least 45 different banding patterns were noted among medical center isolates.

Interventions were implemented in November and December 1993 and included placement of all patients with VRE in "multidrug-resistant organism" isolation, similar to CDC's recommended contact isolation. Compliance with isolation procedures was monitored. Routine stool cultures for VRE at admission and weekly were obtained from all patients in the surgical intensive care and intermediate care units. Patients colonized or infected with VRE in these units were segregated spatially, and nurses caring for the patients were placed in cohorts. Nurses caring for culture-positive patients in the cancer center also were placed in cohorts.

Vancomycin restriction policies were implemented with strict criteria for use. Compliance was monitored by the pharmacy department. Vancomycin was not dispensed unless an appropriate indication was documented or the infectious disease attending physician approved use of the drug.

The vancomycin restriction policies resulted in a 59% decrease in intravenous vancomycin use and an 85% decrease in oral vancomycin use. Observational studies of compliance with isolation technique revealed one or more breaks in contact isolation technique in 44% (25/57) of patient-healthcare worker interactions. The nature of the breaks in technique varied among units.

Point-prevalence surveys in April, May, and June 1994 showed a consistent 20% rate of colonization with VRE. No significant changes were seen in the rates of VRE infection after implementation of control measures.

The control measures that were implemented in fall 1993 were almost identical to those subsequently recommended by the CDC for VRE. The authors note that although the interventions did not reduce the rates of VRE colonization or infection, they may have prevented a further increase among their patient population.

The authors concluded that VRE strains appeared to have established stable endemicity in their patient population with an adjusted prevalence of 16% to 18%. The diversity of isolates (based on molecular typing studies) suggested that resistant organisms have been introduced from multiple sources. The fact that VRE was not isolated from health community volunteers suggests that resistant enterococci either are not distributed widely in the general (nonhospitalized) population or are present at nondetectable levels. The authors note that they are not optimistic that the CDC guidelines for control of VRE will block the spread of this organism effectively and suggest that more sophisticated epidemiologic studies are needed to define routes by which the bacterium enters and is maintained within patient populations.

FROM: Morris JG, Shay DK, Hebden JN, et al. Enterococci resistant to multiple antimicrobial agents, including vancomycin—establishment of endemicity in a university medical center. *Ann Intern Med* 1995;123:250-259.

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