Medical News

EDITED BY GINA PUGLIESE, RN, MS; MARTIN S. FAVERO, PHD

Hospital Outbreak of *Salmonella*

Salmonella senftenberg most commonly is isolated from poultry, particularly turkey, but is an uncommon human pathogen that rarely has been implicated in outbreaks of human salmonellosis. When two hospitalized patients were identified as being infected within a 4-day period, an epidemiologic investigation was initiated. Twenty-two cases of infection due to *S senftenberg* were detected between March 1993 and November 1994, involving 18 patients and 4 healthy employees. The isolates had identical antibiograms and pulsed-field gel electrophoretic patterns. A case-control study indicated that consumption of turkey prepared in the hospital's kitchen was a significant risk factor. Because of the uniqueness of the isolate, the prolonged nature of the outbreak, the epidemic curve, and multiple negative cultures of specimens from employees, the food, and environmental surfaces and devices, the investigators concluded the source of the outbreak was introduced into the hospital's kitchen during or before March 1993 and that this initial contamination was followed by a secondary low-level contamination of a kitchen source, which continued through November 1994.

This outbreak has several implications for infection control. Significant outbreaks of salmonellosis remain unrecognized by many hospitals and health departments for substantial periods of time despite maintenance of rigorous surveillance systems. The computerized microbiology surveillance system used by this hospital proved useful, and information on the two sentinel cases triggered the investigation. In addition, outbreak investigations and observations of complex processes (eg, food production) often are time consuming. However, they provide opportunities to reinforce good food handling practices, regardless if deviations are related to the outbreak. Several deficiencies were noted that required correction. These included erratic labeling and dating of food, raw eggs used in several dishes, eggs and produce handled on the same counter (at different times) by the same employee, color-coded cutting boards used for wrong type of food, and inconsistent handwashing by employees following food preparation. On follow-up inspections, the deficiencies had been corrected, but the authors concluded that long-term follow-up is needed to effect optimal behavior modification.

FROM: L'Ecuyer PB, Diego J, Murphy D, et al. Nosocomial outbreak of gastroenteritis due to *Salmonella senftenberg. Clin Infect Dis* 1996;23:734-742.

S epidermidis Resistant to Vancomycin

Dr. J. Johnston and colleagues from Reston (Virginia) Hospital Center and the CDC recently reported what may be the first clinically significant isolate of *Staphylococcus epidermidis* to demonstrate decreased susceptibility to vancomycin. Two strains of gram-positive cocci were isolated from two positive blood cultures drawn from the same patient 5 days apart. The strains were tested in a MicroScan Walkaway System on Dried-Overnight Gram-Positive Panels (Dade Microscan Inc, West Sacramento, CA). Both strains were identified as *S epidermidis* and gave vancomycin minimum inhibitory concentrations of 8 or 16, both of which are intermediate interpretations. Repeat testing produced the same results.

Because of the interest in emergence of resistance to vancomycin in staphylococci, the isolates were sent to the CDC. Both the vancomycin sensitivity results of intermediate and the identification of the isolate were confirmed by the CDC. The antibiogram of the two isolates differed only in that one strain was susceptible to clindamycin and erythromycin, and the other strain was resistant to both. The two strains were resistant to penicillin, oxacillin, ciprofloxacin, and trimethoprim-sulfamethoxazole and were susceptible to rifampin, tetracycline, and chloramphenicol. This report of what may be the first clinically significant isolate of *S epidermidis* with resistance to vancomycin raises serious concerns because of the possibility of transference of resistance to *Staphylococcus aureus.*

FROM: Johnston J, Honea N, Van de Weghe M, et al. Emerging vancomycin resistance detected in staphylococci detected by MicroScan Dried Overnight Panels. Presented at the 36th Interscience Conference on Antimicrobial Agents and Chemotherapy; November 15-18, 1996; New Orleans, LA. Late Breaker Abstract No. LB15.

Semi-Quantitative and Sonication Cultures of IV Catheters Comparable

Dr. Dennis Maki and colleagues recently reported the results of a prospective study comparing the sensitivity, specificity, and predictive values of semi-quantitative cultures of central venous catheter (CVC) segments with sonication culture. All possible sources of CVC-related bloodstream infection were cultured prospectively: skin, infusate, and hub of each CVC lumen and CVC segments. CVC causation of bloodstream infection (BSI) was confirmed by pulsed-field gel electrophoresis and restriction fragment-length polymorphism subtyping. The two quantitative culture methods correlated remarkably well overall (P<.001); for CVC-related BSI, semi-quantitative cultures >10 colony-forming units (CFUs) detected 10 of 11 BSIs (sensitivity 91%, specificity 76%, positive predictive value 10%), and sonication >10^3 CFUs detected 8 BSIs (sensitivi-

https://doi.org/10.1086/647246 Published online by Cambridge University Press