Letters to the Editor

A Cluster of MRSA -- The Little Outbreak That Wasn't

To the Editor:

Few hospitals enjoy the luxury of being free of methicillin-resistant *Staphylococcus aureus* (MRSA), so when a cluster of three cases appeared within a 16-day period in our hospital (essentially MRSA-free for several years), the alarm bells sounded. Investigation of the incident uncovered some unexpected but welcome findings.

CASE SUMMARIES

Case #1

A 57-year-old diabetic male paraplegic was admitted from an outlying hospital with infected deep pressure sores in his pelvic area. He was febrile, and the decubitus ulcers were discharging foul-smelling pus. MRSA was recovered from the pressure sores and a nasal swab.

Case #2

A 78year-old female with a 9-month history of chronic osteomyelitis of the humerus and an infected sinus following treatment of a traumatic fracture by open reduction and internal fixation presented with a cellulitis unresponsive to antibiotics and nonunion of the fracture. Sinus wound cultures yielded MRSA but nasal swabs were negative.

Case #3

A 53-year-old male with psychiatric problems, peripheral neuropathy due to diabetes, and intermittent claudication was admitted to the hospital with a l-month history of redness, pain, and swelling of his lower right leg. A necrotic ulcer of his right great toe was present with a deep underlying abscess. Cultures of the lesion and nasal swabs yielded MRSA.

INVESTIGATION OF THE CLUSTER

Epidemiologic investigation of the cluster revealed that two of the patients had been admitted to the same ward and that one service (plastic surgery) had contact with both the first and third patients. All three isolates were presumptively identified as MRSA by screening for growth on a Mueller-Hinton agar plate containing 6 μg of oxacillin per mL and by determination of the oxacillin minimum inhibitory concentration $\Sigma\geqslant$ 16.0 mg/L) by the Vitek instrument. Analysis of the antibiograms of the three isolates revealed consistent differences in their susceptibility patterns. Later typing studies determined that the strains belonged to different phage types. Detailed investigation of the patients' backgrounds uncovered the fact that two had been noted to be colonized previously by MRSA at other, unrelated institutions. Standard infection control practices with respect to body substance precautions were reinforced, eg, handwashing, single room accommodation, topical mupirocin, gloving, etc, and no cross-transmission resulted from any of the cases.

COMMENT

The isolation of MRSA from three patients exhibiting temporal and geographic clustering suggested nosocomial spread and a breakdown of infection control practices.[1] Happily, investigation of the incident using standard infection control practices[2] and traditional typing methods[3] showed that the cluster was simply a coincidence.

REFERENCES

1. US Department of Health and Human Serices. Guidelines for investigating clusters of health events. *MMWR* 1990;39:1-23.
2. Boyce JM. Methicillin-resistant *Staphylococcus aureus* in hospitals and long-term care facilities: microbiology, epidemiology, and preventive measures. *Infect Control Hosp Epidemiol* 1992;13:725-737.
3. Tenover FC, Arbeit R, Archer G, et al. Comparison of traditional and molecular methods of typing isolates of *Staphylococcus aureus. J Clin Microbial* 1994;32:407-415.

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Hospital Epidemiology Training Course

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The Society for Healthcare Epidemiology of America (SHEA), the Centers for Disease Control and Prevention, and the American Hospital Association will cosponsor a hospital epidemiology training course October 14-17, 1995, in Miami, Florida. The course is designed for infectious disease fellows, hospital epidemiologists, and infection control practitioners. It will offer hands-on exercises to improve skills in detection, investigation, and control of epidemiologic problems encountered in the hospital setting, as well as presentations on the fundamental aspects of hospital epidemiology.

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