Letters to the Editor

First Report of Community-Associated Methicillin-Resistant Staphylococcus aureus (USA300) in Mexico

Methicillin-resistant Staphylococcus aureus (MRSA) constitutes an important threat to hospitalized patients worldwide. In the late 1990s, community-associated-MRSA (CA-MRSA) emerged in previously healthy patients in many countries and is now endemic in several U.S. hospitals (6). In Latin America, CA-MRSA has been described to occur in Uruguay (7), Brazil (11), and the Andean Region of South America (1, 10). We describe five cases of CA-MRSA infections in patients in the Hospital San José Tec de Monterrey, Nuevo León, Mexico, between February and March 2008.

Three of the patients were children between 1 and 7 years of age. The first patient was a 1.4-year-old child with a history of retinoblastoma of the left eye diagnosed in November 2007, when he was started on chemotherapy. In February 2008, he returned to the hospital with fever of a 2-week duration. Blood cultures yielded MRSA, and vancomycin was initiated for 1 week. Two other, previously healthy children, 3 and 7 years of age, arrived at the hospital with abscesses with severe local reaction from where MRSA was isolated. After drainage, both were treated with clindamycin.

Two other patients were previously healthy adults, a 24-year-old woman and a 23-year-old man with abscesses that required hospitalization. Drainage of lesions yielded MRSA on culture, and the patients were treated with linezolid. All patients were discharged after clinical cure, and no relapse was reported.

Staphylococcal isolates were identified using MicroScan (Dade-Behring, Sacramento, CA) and tested for antimicrobial susceptibility by broth microdilution, according to the Clinical and Laboratory Standards Institute (2), using cation-adjusted Mueller-Hinton broth (CAMHB) and CAMHB (Oxoid, United Kingdom) plus 2% NaCl for oxacillin and methicillin. S. aureus ATCC 29213 was used as a control strain. Clonal types were assigned using pulsed-field gel electrophoresis (PFGE) after SmaI digestion of chromosomal DNA (8). Control strains USA300 and USA400 (kindly donated by Gerardo Oliveira, D. C., and H. de Lencastre) were included in the analysis. Staphylococcal cassette chromosome mec element (SCCmec) typing and multilocus sequence typing (MLST) were performed as previously published (4, 9). The presence of Panton-Valentine leukocidin (PVL) was confirmed by PCR (5). Analysis of patterns obtained by PFGE was carried out using NTSYSpc, version 2.0.2.11 (Applied Biostatistics, Inc.), after visual inspection.

All organisms were susceptible to clindamycin, gentamicin, linezolid, rifampin, tetracycline, trimethoprim-sulfamethoxazole, and vancomycin and were resistant to beta-lactams and erythromycin; four of them were resistant to ciprofloxacin, three were resistant to chloramphenicol, and one was resistant to levofloxacin. PFGE analysis revealed that the pattern was similar to that observed for the CA-MRSA USA300 genotype. All isolates displayed sequence type 8 and spa type t008; they were positive for PVL and harbored SCCmec type IV. Clusters analysis showed similarity to the USA300 and USA400 control strains (88% and 71%, respectively).

Molecular epidemiology of hospital-acquired MRSA in Mexico has been reported in previous years (3), but this is the first molecular recognition of CA-MRSA in the country. Multicenter and community surveillance studies are necessary to evaluate the extent of the spread of this pathogen in Mexico and should include molecular characterization of clones.

We do not have any conflicts of interest in the subject area of the research discussed.

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REFERENCES


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