Isolation of Leclercia adecarboxylata from an Infant with Acute Lymphoblastic Leukemia

Str—Although Leclercia adecarboxylata was initially described in 1962 [1], reports of clinically significant infections involving this motile, gram-negative bacillus are uncommon. In the world’s literature, 8 cases have been reported in which L. adecarboxylata was isolated from infected patients [2, 3]. In 4 of these cases, L. adecarboxylata was isolated from the blood of patients with an underlying medical condition (2 patients with hepatic cirrhosis, 1 child who was receiving long-term total parenteral nutrition, and 1 adult with neutropenia who had received a bone marrow transplant). In the other 4 cases, L. adecarboxylata was isolated from patients with mixed microbial infection (from lower extremity wound infections in 3 patients and from the sputum of 1 patient with adult Still’s disease and pneumonia), which raises questions regarding the organism’s role in these infections. We write to report another case involving an infant with acute lymphoblastic leukemia (ALL).

In September 2000, we admitted to the hospital an 11-month-old girl with ALL and a chief complaint of chills and fever (temperature, 38.6°C). Her medical history was notable for a diagnosis of ALL at 4 months of age and multiple episodes of bacteremia during periods of neutropenia. The findings of a physical examination were significant for oropharyngeal mucositis, severe diaper dermatitis, and a small anal fissure. A complete blood count revealed 10.3 x 10³ WBCs/mm³ (84% neutrophils, 5% band forms, and 11% lymphocytes). On the basis of antimicrobial sensitivities known from the patient’s previous episodes of bacteremia, she was treated empirically with iv gentamicin and ciprofloxacin. Cultures of 2 blood samples obtained within 24 h of admission and prior to treatment yielded Staphylococcus aureus and L. adecarboxylata. The State of California Microbial Disease Laboratory confirmed the identity of L. adecarboxylata by means of biochemical testing. The organism was susceptible to all antimicrobial agents tested, including amikacin, ampicillin, cefazolin, cefepime, cefotaxime, ceftriaxone, cefalothin, ciprofloxacin, gentamicin, piperacillin, tobramycin, and trimethoprim-sulfamethoxazole. The fever, chills, and bacteremia resolved within 24 h, and on day 5 after admission to the hospital, the patient was discharged home to complete a 10-day course of iv gentamicin and cefazolin.

Previous reports have suggested that L. adecarboxylata infection in otherwise healthy adults is found primarily as one component of a polymicrobial wound infection. Infection with L. adecarboxylata alone, as determined by the results of blood cultures, has been found only in patients whose immune defenses are compromised by an underlying medical condition. Although our patient did not have neutropenia, she was immunocompromised as a result of cancer chemotherapy and interrupted physical barriers (mucositis, diaper dermatitis, and an anal fissure). Testing of antimicrobial agents demonstrated pansensitivity. However, as in 4 of the 8 previous cases, the clinical significance of L. adecarboxylata in our patient’s infection remains unclear because it was isolated together with Staphylococcus aureus. The reporting of additional cases of L. adecarboxylata infections could help clinicians develop a better understanding of the pathogenic potential of this organism.

C. A. Longhurst and Daniel C. West
Department of Pediatrics, School of Medicine, University of California Davis

References

Reprints or correspondence: Dr. Daniel C. West, Dept. of Pediatrics, University of California Davis, 2516 Stockton Blvd., Sacramento, CA 95817 (dcwest@ucdavis.edu).