

Kingella kingae Bacteremia in an Immunocompetent Adult Host

Kingella kingae is a gram-negative bacillus belonging to the family *Neisseriaceae* (3). It does not grow readily on the usual media, it is uniformly susceptible to penicillin, and it can be easily misidentified. This organism colonizes mucous membranes at the upper respiratory tract (8), and although increasingly recognized as being involved in human infection, it is currently considered an unusual bacterial pathogen (7).

Infections due to *K. kingae* are seen predominantly in infants, young children, and immunodeficient hosts. Commonly reported diseases include septic arthritis, osteomyelitis (2, 11), and endocarditis (5, 9), but cases of diskitis (10), meningitis (12), abscesses (7), endophthalmitis (1), corneal ulcers (6), and bacteremia (4) have also been reported.

We report a case of a patient, an immunocompetent 38-year-old male, with a native mitral valve insufficiency secondary to surgery for congenital ostium primum. A few days prior to hospital admission, he underwent a dental manipulation procedure. Upon admission, he was noted to have low-grade fever and heart failure. Two complete sets (one aerobic and one anaerobic culture bottle each) of blood cultures were performed with an interval of 30 min (Hémoline DUO; Bio-Mérieux, Paris, France). Three days after collection and incubation of the samples, gram-negative rod-shaped bacteria were seen on Gram smears in all four blood culture broths. At this time, broth was subcultured to solid media. After 1 day of incubation at 37°C, a sparse growth of tiny colonies, surrounded by a zone of a beta type of hemolysis, was obtained on 5% sheep blood. Colonies were also seen on chocolate agar. No growth was noted on MacConkey agar, and the organism was not mobile and was negative for catalase, indole production, esculin and gelatin hydrolysis, urease, and Simmons citrate and nitrate reduction. Tests for cytochrome oxidase, glucose, and maltose fermentation were positive. Identification of the isolates as *K. kingae* was confirmed by the Laboratoire des Identifications at the Institut Pasteur (Paris, France). The organism was susceptible to penicillin, ampicillin, cephalothin, cefazolin, cefuroxime, cefotaxime, ceftriaxone, gentamicin, and ciprofloxacin but resistant to trimethoprim-sulfamethoxazole as determined by the disk diffusion method in Mueller-Hinton agar supplemented with 5% sheep blood and following incubation for 18 h at 37°C.

Echocardiography revealed that the patient showed no signs of endocarditis, but treatment with intravenous ceftriaxone (2 g/day) was begun and was continued for 4 weeks. The patient improved once the treatment was started and was discharged without symptoms at the end of the treatment period.

K. kingae is generally described as a commensal bacterium of the mouth and can produce infection, most commonly in infants and immunodeficient hosts. We observed this organism infecting an otherwise immunocompetent host. Dental manipulation, probably associated with disruption of the normal mucosal barrier, could have acted as a risk factor in promoting bacteremia in our patient.

Laboratories should be aware of the potential of this organism to cause invasive diseases.

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