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 of 37°C, a sparse growth of tiny colonies, surrounded by a zone of a beta type of hemolysis, was obtained on Gram smears in all four blood culture broths. At this time, broth was subcultured to solid media. After 1 day of incubation of 37°C, a sparse growth of tiny colonies, surrounded by a zone of a beta type of hemolysis, was obtained on Gram smears in all four blood culture broths.

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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REFERENCES


Maria Pía Roiz
Laboratorio de Microbiología
Francisco Gato Peralta
Rafael Arjona
Servicio de Medicina Interna
Hospital Comarcal Sierrallana Torrelavega
39300 Cantabria, Spain