Failure To Clear a Roseomonas Line Infection with Antibiotic Therapy

Roseomonas is a pink gram-negative rod that has been recognized as a cause of human infection [1]. This organism was formerly placed in the Centers for Disease Control and Prevention’s “pink coccoid” groups I–IV. Roseomonas species have been previously isolated from human blood, CSF, sputum, wounds, and genital mating sites [1, 2] as well as from patients with vertebral osteomyelitis [3]. To our knowledge, this is the first report of roseomonas bacteraemia in a patient with a Hickman catheter. We were unable to eradicate the infection without removing the catheter.

A 26-year-old female with chronic intestinal pseudo-obstruction requiring home total parenteral nutrition was admitted to the hospital with fevers, chills, vomiting, nausea, and diarrhea. The patient had a left subclavian Hickman line, which was believed to be the most likely source of infection, although no evidence of exit-site infection was present.

Blood cultures were performed, and treatment with vancomycin was begun. On admission, the patient had a WBC count of 3,700/mm³ with 76% neutrophils. She remained febrile, and by the end of the second hospital day, cultures were positive for a gram-negative rod. Treatment with cefazidime (1 g q8h) and gentamicin (1.5 mg/kg q8h) was begun, and she became afebrile while receiving this regimen. The isolate was identified as Roseomonas. When the results of the initial susceptibility tests were available, therapy was switched from cefazidime to cefuroxime (1 g q8h). The patient continued receiving the regimen of cefuroxime and gentamicin. Serum drug levels of gentamicin before and after administration of the drug (trough level, 1.1 μg/mL, and peak level, 6.5 μg/mL) were therapeutic.

Blood cultures were still positive for Roseomonas by the fourth hospital day. The Hickman line was removed on day 5; a blood culture performed at that time yielded Roseomonas. The patient remained afebrile, and blood cultures were negative for bacterial growth after the Hickman line was removed. A transthoracic echocardiogram demonstrated minimal mitral regurgitation but no vegetations.

The Roseomonas isolate was resistant to ampicillin and piperacillin; intermediately resistant to cefazolin, cefazidime, and cephalothin; and susceptible to cefuroxime, cefotaxime, gentamicin, tobramycin, amikacin, and imipenem.

The identity of the causative pathogen and the presence of bloodstream infection are indications for removal of a Hickman catheter [4]. Gram-negative or fungal bloodstream infections are two important indications for Hickman catheter removal. In recent reports of patients with Hickman catheter infections, 2%–32% of the catheters were removed [4, 5].

This report is the first to describe a roseomonas line infection and failure to clear the infection despite achievement of therapeutic drug levels.

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References