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Achromobacter xylosoxidans, an Emerging Pathogen in Catheter-related Infection in Dialysis Population Causing Prosthetic Valve Endocarditis: A Case Report and Review of Literature.

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Introduction: Dialysis catheter-related infection is a major cause of morbidity and mortality in patients on dialysis. In recent years, there have been reported cases of infections with opportunistic environmental organism, Achromobacter xylosoxidans (AX) causing bacteremia in patients on dialysis. However, no previous such reports on prosthetic valve endocarditis in a dialysis patient with Achromobacter xylosoxidans were found after a Medline search. We report such a case and review the literature.

Case: A 69-year-old diabetic man with bioprosthetic aortic valve replacement developed end-stage renal disease following infective endocarditis with Staphylococcus epidermidis. Even though he was treated successfully for his endocarditis, he developed further bacteremia with AX from his peripherally inserted central catheter (PICC) and the line was removed. He had further episodes of bacteremia with AX while having dialysis with tunneled line and the line was also removed. He was re-admitted with pyrexia and vegetations both in mitral and prosthetic aortic valve confirmed with transesophageal echo. His antimicrobial therapy with etrapenum, tigecycline and cotrimoxazole failed. He had both mitral and prosthetic aortic valve replacements but postoperatively developed multiorgan failure and died despite the intensive support.

Discussion: Achromobacter xylosoxidans is an aerobic, Gram-negative bacillus and considered to be an opportunistic pathogen with low virulence. Infective endocarditis is a potentially lethal complication of bacteremia. The choice of appropriate antibiotic is crucial in these cases. AX strains are highly resistant to antibiotics. The organism is usually susceptible to antipseudomonal penicillins, carbapenems and trimethoprim-sulfamethoxazole.

Conclusion: AX is an emerging pathogen in catheter-related infection in the dialysis population and, therefore, needs vigilance and prompt treatment. Antimicrobial treatment should include susceptibility and synergy testing. Removal of central intravenous catheter should also be considered at the time of early presentation in patients at high risks of developing infective endocarditis.

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