

## Hemodialysis catheter-related bacteremia caused by *Stenotrophomonas maltophilia*

Sir,  
Catheter-related bloodstream infections cause significant morbidity and mortality in hemodialysis patients.

Other than the commonly isolated organisms such as coagulase negative *Staphylococcus aureus* and other skin commensals, Gram-negative organisms including *Pseudomonas* are identified especially in those with frequent exposures with health care environment.<sup>[1]</sup> We encountered catheter-related bacteremia by *Stenotrophomonas maltophilia* in three hemodialysis patients that were successfully treated with dialysis catheter removal and antibiotic therapy. The patients presented with acute onset of fever without any localizing symptom [Table 1]. All patients had tunneled internal jugular catheters for dialysis access, with benign exit sites and no evidence of tunnel infection. Blood cultures from the tunneled catheters grew *S. maltophilia* in all within 24–72 h of incubation. The strains were sensitive to ampicillin-sulbactam, levofloxacin and trimethoprim-sulfamethoxazole (TMP-SMX). The bacteremia persisted despite treatment with dual antibiotic therapy for 4–5 days, necessitating catheter removal. Subsequently, the patients recovered and repeat blood cultures were sterile. New tunneled catheters were inserted for further dialysis in all patients. Each patient received either oral levofloxacin or ampicillin-sulbactam along with TMP-SMX for 3 weeks.

Bacteremia in hemodialysis patients commonly originates from the dialysis catheter itself. *S. maltophilia* is a ubiquitous Gram-negative bacillus and is closely related to the *Pseudomonas* species.<sup>[2]</sup> Risk factors for infection with *S. maltophilia* include hospitalization, HIV infection, malignancy, neutropenia, mechanical ventilation and presence of central venous catheters. *S. Maltophilia* can form biofilm on the catheters and other in situ-devices.<sup>[3]</sup> Strains are frequently resistant to a number of antibiotics including aminoglycosides and carbapenems.

Historically, *S. maltophilia* bacteremia was described with the use of contaminated O-rings inside the dialyzers and contaminated water for reprocessing dialyzers.<sup>[4]</sup> Routine surveillance cultures of the dialysate water did not show any microbial growth in our dialysis unit. Treatment of *S. maltophilia* bacteremia in hemodialysis patients commonly necessitates dialysis catheter removal along with dual antibiotic coverage for at least 3 weeks. The rationale for dual antibiotic therapy for bacteremia caused by *S. maltophilia* is based on the reported *in vitro* synergy of combined antibiotics including TMP-SMX plus ceftazidime, TMP-SMX plus ticarcillin-clavulanic acid, and ticarcillin-clavulanic acid plus ciprofloxacin.<sup>[5]</sup>

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**Table 1: Demographic features and clinical course of the patients**

History/presentation	Organism isolated in the blood culture	Therapy used	Clinical course
38/female with ESRD from HTN; presented with fever for 3 days	<i>S. Maltophilia</i> isolated after 48 h, sensitive to levofloxacin, TMP-SMX and ampicillin-sulbactam	Catheter removal on day 7 along with TMP-SMX and Levofloxacin for 3 weeks	Afebrile after catheter removal. New dialysis catheter inserted afterward
49/male with ESRD after liver transplant (3 years posttransplant) ESRD from NASH, DM	<i>S. Maltophilia</i> isolated after 72 h, sensitive to levofloxacin, TMP-SMX and ampicillin-sulbactam	Catheter removal on day 5 plus TMP-SMX indefinitely and piperacillin-tazobactam for 3 weeks	Afebrile after catheter removal. New dialysis catheter inserted afterward
47/male with ESRD from diabetic nephropathy	<i>S. Maltophilia</i> isolated after 24-48, sensitive to levofloxacin, TMP-SMX and ampicillin-sulbactam	Catheter removal on day 5 plus TMP-SMX and piperacillin-tazobactam for 3 weeks	Afebrile after catheter removal. New dialysis catheter inserted afterward

TMP-SMX: Trimethoprim-sulfamethoxazole, ESRD: End stage renal disease, HTN: Hypertension, DM: Diabetes mellitus, HD: Hemodialysis, *S. Maltophilia*: *Stenotrophomonas Maltophilia*, NASH: Nonalcoholic steatohepatitis

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