**Continuous Ambulatory Peritoneal
Dialysis-Related Exit-Site Infections
Caused by *Achromobacter denitrificans*
and *A. xylosoxidans***

KEY WORDS: *Achromobacter* species; CAPD-related exit-site infection.

Editor:

Achromobacter species (non-fermenting gram-negative rods) are normally found in the skin and gastrointestinal tract. In rare cases, *Achromobacter* species have been reported to cause continuous ambulatory peritoneal dialysis (CAPD)-related peritonitis, but they have not in the past been reported as a pathogen in CAPD-related exit-site infection.

CASE REPORT

An 82-year-old woman with a history of diabetic nephropathy, in stage 5 chronic kidney disease, was implanted with a peritoneal dialysis (PD) catheter in anticipation of dialysis initiation. Three months later, she presented with abdominal pain, erythema, and purulent discharge from the exit site for 3 days.

The leukocyte count in peritoneal effluent was less than 100/mm³, with 58% lymphocytes. Ultrasonography did not reveal any abnormal fluid accumulation around the CAPD catheter, leading to a diagnosis of CAPD-related exit-site infection. Pus culture yielded *A. denitrificans*. Based on sensitivity testing, antibiotic treatment was switched to oral ciprofloxacin 250 mg every 12 hours. Her clinical condition improved rapidly, and treatment was maintained for 2 weeks.

Eight weeks later, the patient again presented with abdominal pain and purulent discharge from the exit site. Pus culture grew *A. xylosoxidans*, which was identified using the VITEK 2 system (bioMérieux–Vitek, Hazelwood, MO, USA). This automated identification system was able to provide definitive culture results for *A. xylosoxidans* and *A. denitrificans* (1). Based on sensitivity testing, the previously used therapy was again administered for 14 days with a similar good clinical response. No further exit-site infection recurred.

A. denitrificans and *A. xylosoxidans* are part of the normal human flora. Clinically, *Achromobacter* species have been reported to cause endocarditis (in patients with pacemakers), bacteremia, pneumonia, intra-abdominal infection, and meningitis, especially when host immunity is compromised (2,3). In only rare cases is CAPD-related peritonitis induced by *Achromobacter* species, and CAPD-related exit-site infection caused by these micro-organisms has never been reported (4–8).

The clinical outcomes of CAPD-related peritonitis caused by this organism vary with its generalized resistance to most antimicrobial agents. In some cases, removal of catheter is necessary to prevent mortality (5,6,8). In our case, the micro-organisms were sensitive to ceftazidime, cefepime, sulfonamides, quinolone, carbapenems, and piperacillin–tazobactam.

This is the first reported case of CAPD-related exit-site infection to be caused by *Achromobacter* species. Early diagnosis and use of appropriate antibiotics usually prevent removal of the PD catheter.

DISCLOSURES

The authors have no financial conflicts of interest to disclose.

M.T. Tsai¹
W.C. Yang^{1,2}
C.C. Lin^{1,2*}

Division of Nephrology¹
Taipei Veterans General Hospital
School of Medicine²
National Yang-Ming University
Taipei, Taiwan

*email: lincc2@vghtpe.gov.tw

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