***Staphylococcus aureus* Peritonitis in
Two Peritoneal Dialysis Patients: An
Uncommon Complication of
Peripheral Intravenous
Catheter Infection**

KEY WORDS: Peritonitis; *Staphylococcus aureus*; intra-venous catheter.

Editor:

Staphylococcus aureus—in particular, methicillin-resistant *S. aureus* (MRSA)—can cause severe peritonitis, peritoneal failure, and mortality in peritoneal dialysis (PD) patients. We report 2 cases of *S. aureus* peritonitis that arose after infection of a peripheral intravenous catheter.

CASE 1

A 74-year-old PD patient was diagnosed with pulmonary tuberculosis in early 2011. Parenteral nutrition was started via peripheral intravenous catheter because the patient was markedly malnourished after prolonged hospitalization. She was noted to have phlebitis around the forearm drip site, and the intravenous catheter was immediately changed. She nevertheless developed fever,

chills, and rigor, and was started on empirical amoxicillin clavulanate. However, her illness was further complicated by PD-associated peritonitis and septic shock. She was then started on intraperitoneal cefazolin and amikacin. A dose of intravenous vancomycin was also given empirically. Despite those efforts, the patient's condition deteriorated rapidly, and she succumbed 2 days after the onset of fever. Blood and PD effluent cultures subsequently grew MRSA.

CASE 2

A 78-year-old male PD patient was admitted in September 2011 for dehydration and hypotension. He was given intravenous fluid via peripheral intravenous catheter. His condition became further complicated by a drip-site infection and methicillin-sensitive *S. aureus* bacteriemia. Intravenous amoxicillin clavulanate was started. However, the PD effluent turned turbid the next day, and the culture also grew methicillin-sensitive *S. aureus*. Systemic and intraperitoneal antibiotics were started. The forearm phlebitis resolved, and the PD effluent cleared after the course of antibiotic treatment.

DISCUSSION

In PD patients, *Staphylococcus* peritonitis is frequently associated with concurrent exit-site or tunnel tract infection (1). Hematogenous spread secondary to intravenous catheter infection and *Staphylococcus* bacteriemia is an uncommon cause of PD-associated peritonitis. Intravenous catheter-related *S. aureus* infection has recently emerged as a major nosocomial infection. To prevent staphylococcal peritonitis in hospitalized PD patients, early detection of drip-site infection and avoidance of prolonged placement of intravenous catheters should be exercised alongside exit-site care and eradication of nasal carriage of *Staphylococcus*.

DISCLOSURES

The authors have no relevant financial conflicts of interest to declare.

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