***Pasteurella multocida* Peritonitis with
Bacteremia on Initiation of
Peritoneal Dialysis**

KEY WORDS: *Pasteurella multocida*; peritonitis; bacteremia; pets; animals.

Editor:

In this journal, Mugambi and Ullian recently described the first case of peritoneal dialysis (PD)-associated *Pasteurella multocida* (PM) peritonitis with septic shock in a patient on chronic PD under corticosteroid treatment for systemic lupus erythematosus (1). Here, we report a second case of PD-associated peritonitis with bacteremia attributed to PM.

Our patient—a 57-year-old Caucasian male with a past medical history significant for hypertension, gastroesophageal reflux disease, and end-stage renal disease secondary to autosomal-dominant polycystic kidney disease that required PD—presented a single day after his first PD training session with complaints of fever and diffuse abdominal pain for 3 days. The patient had undergone PD catheter placement 3 weeks before presentation. He was febrile (oral temperature: 38.4°C) and suffered from diffuse abdominal tenderness without

peritoneal signs. His PD catheter and exit site appeared intact, without signs of infection.

Laboratory examination revealed neutrophilia, with a normal white blood cell count. The peritoneal fluid was creamy and yellow, and an initial fluid analysis showed a white blood cell count of 25 879 cells/mL, with 79% neutrophils, and a red blood cell count of 480 cells/mL. Computed tomography of the abdomen and pelvis without contrast showed no evidence of perforation, inflammation, or abscesses.

A diagnosis of PD catheter-associated peritonitis was made, and the patient was treated empirically with intraperitoneal vancomycin and ceftazidime. He was also initiated on PD during his hospitalization. Cultures of the peritoneal fluid grew PM that was sensitive to ampicillin, ceftriaxone, and trimethoprim-sulfamethoxazole. Initial blood culture also grew PM with identical sensitivities. The patient reported owning two dogs and two cats, but denied scratches, bites, or exposure of his PD catheter to any of the animals.

The patient remained on the vancomycin and ceftazidime regimen and improved clinically, achieving normalization of his peritoneal fluid cell counts and sterile repeat blood and peritoneal cultures on the second day of treatment. He was discharged home after 6 days of hospitalization, and he completed a total course of 14 days of treatment as an outpatient.

In all previously reported PM peritonitis cases, patients had been receiving chronic PD at the time of diagnosis (1–4). Our patient was at an initial stage of treatment. Nearly all cases are associated with cat exposure, and more than half with dialysis tubing leakage. Our patient was indeed exposed to both domestic cats and dogs, and yet he did not have any dialysis equipment at home other than his PD catheter, and he had no relevant history or physical exam findings of pet bites or scratches. The PD catheter was the most likely port of entry of the pathogen to the peritoneum, with subsequent dissemination to the blood. In contrast to the immunocompromised patient with septic shock reported by Mugambi and Ullian, our patient was immunocompetent and suffered from a mild bacteremia that did not require removal of his PD catheter.

Despite widespread exposure to pets, patients with PD-associated PM peritonitis are rarely reported. We are aware of the immense psychological and physiologic benefits of owning a pet, and we therefore advocate for the formation of appropriate guidelines. In the meantime we highly recommend that PD patients be educated by their health care providers to maintain adequate hygiene.

DISCLOSURES

The authors declare that no financial conflict of interest exists.

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