Ofloxacin Solution for Persistent Exit-Site and Tunnel Infection in Peritoneal Dialysis

KEY WORDS: Ofloxacin solution; exit-site infection; tunnel infection; Tenckhoff catheter.

Editor:

Infections of the Tenckhoff catheter exit site and tunnel require antibiotic therapy to treat the infection and to prevent progression to peritonitis (1,2). In general, 2 – 3 weeks of an oral antibiotic eradicates the infection (1). We describe 2 cases of persistent infection (1 of the exit site and 1 of the tunnel) involving an exposed PD catheter outer cuff.

CASE DESCRIPTIONS

Case 1 involved a 50-year-old African American man with an abdominal PD catheter. He had 2 episodes of tunnel infection 2 months apart that grew *Pseudomonas aeruginosa*. Case 2 involved a 70-year-old African American woman with a presternal PD catheter. She initially grew methicillin-resistant *Staphylococcus aureus* (MRSA) and *P. aeruginosa*. One month later she grew MRSA and *Achromobacter xylosoxidans*.

Both patients were treated with oral ciprofloxacin 500 mg for 14 days with resolution of the initial infection. However, the infection recurred within a short period, with an exposed PD catheter outer cuff. For the surgeon to shave the exposed cuff, the infection had to be cleared. As a supplement to oral antibiotics, 2 drops of ofloxacin otic solution 0.3% was instilled twice daily into the lumen containing the PD catheter to treat the second episode of infection.

Both patients were fortunate in that they did not develop peritonitis as a result of their PD exit-site or tunnel infection, and they were able to retain the Tenckhoff catheter. No further PD exit-site or tunnel infections with the same organism were observed in either patient after treatment with ofloxacin otic solution, oral antibiotics, and cuff-shaving.

DISCUSSION AND CONCLUSIONS

Despite exit-site care, PD patients experience exit-site and tunnel infections (3–5). The standard of care for PD exit-site and tunnel infections is administration of oral antibiotics for 2 – 3 weeks (1).

Our novel approach using ofloxacin otic solution 0.3% reached the PD exit-site or catheter tunnel and provided therapeutic antibiotic concentrations at the site of infection (6). Ofloxacin otic solution is a sterile aqueous solution normally used to treat otitis externa caused by *Escherichia coli*, *P. aeruginosa*, and *S. aureus* (7).

We propose that ofloxacin otic solution be used as adjuvant antibiotic therapy for severe PD exit-site and tunnel infections with *P. aeruginosa*, MRSA, *Klebsiella pneumoniae*, or *A. xylosoxidans*.

Prompt treatment of PD exit-site and tunnel infections prevents progression to peritonitis. A lower peritonitis rate allows patients to continue treatment with PD.

In summary, ofloxacin otic solution 0.3% may be used as adjuvant antibiotic therapy for PD exit-site and tunnel infections.

DISCLOSURES

SQL consults for Gambro Renal Products, and is a site principal investigator in pharmaceutical research for Reata Pharmaceuticals, Questcor Pharmaceuticals, and Amgen. AG has no financial conflicts of interest to declare.

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