

Images in this Issue
Nephrology



Peritoneal Dialysis Catheter-Related Infection due to *Mycobacterium abscessus* Confused with *Rhodococcus*

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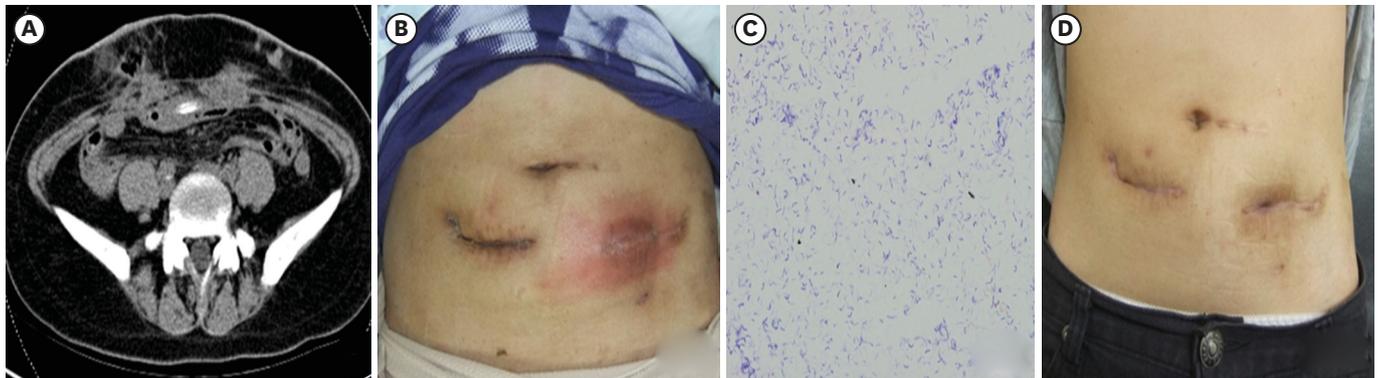


Fig. 1. Findings of computed tomography and the lesions around peritoneal catheter. (A) Abdominal pelvis computed tomography revealed high attenuated inflammation involving both anterior abdominal wall and skin defect. (B) One month after removal of PD catheter, the abdominal wall of the patient revealed purulent discharge with erythema in the previous PD catheter insertion site. (C) The gram-positive rods, which appeared to be *Rhodococcus* on previous culture, finally turned out to be *Mycobacterium abscessus* (hematoxylin and eosin stain × 400 high power field). (D) The abdominal lesion of the patient was completely healed at 6 months after appropriate antibiotic therapy. The images are published under agreement of the patient.

Received: Jul 19, 2019

Accepted: Jan 8, 2020

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A 36-year-old female on peritoneal dialysis (PD) who was admitted in April 2015 presented with painful erythema at the PD catheter exit site. Despite one month of antibiotic therapy, the erythema and discharge persisted. Laboratory tests showed leukocytosis. However, Gram stains and cultures of the peritoneal fluid (PF) and exudates were negative. The patient underwent catheter-reposition surgery, and the previous exit site was drained. However, the discharge continued and peritonitis newly developed. The antibiotics were switched and catheter-reposition surgery was performed again. Gram-stain of the PF showed gram-positive rods, and revealed *Rhodococcal species*. However, those symptoms were improved after the secondary operation. One month later, discharge at the catheter site newly developed. Computed tomography revealed an abscess in the abdominal wall (Fig. 1A). The catheter was immediately removed. The gram-positive rods in PF and exudates were still shown. Acid-fast bacillus stain and culture of specimen from the wound were negative. Two weeks after the operation, the wound began improving. But, two months later, erythematous swelling at the third operation site developed (Fig. 1B). The gram-positive rods, which appeared to be *Rhodococcus* on previous culture, finally turned out to be *Mycobacterium abscessus* (Fig. 1C) in the last wound exudates. Antimicrobial therapy was switched to clarithromycin and amikacin. Two months later, the purulent discharge and erythematous lesion was completely improved (Fig. 1D).

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This work was supported by Wonkwang University in 2020.

Ethics statement

The images are published under agreement of the patient.

Disclosure

The authors have no potential conflicts of interest to disclose.

Author Contributions

Conceptualization: Jung JH. Data curation: Jung JH. Investigation; Jung JH. Writing - original draft: Jung JH. Writing-review & editing: Ahn SH, Jung JH.

Nontuberculous mycobacteria (NTM) may often invade the catheter and dialysate in patients undergoing PD.¹ Moreover, the incidence of PD-related infection caused by NTM that does not respond to empirical antibiotics has risen.² NTM appear as microbiologically beaded gram-positive rods. So, NTM could be misidentified as *Nocardia*, *diphtheroid*, or *Rhodococcus*. Therefore, if organisms that share characteristics with NTM are cultivated in a gram stained specimen and PD catheter-related infection is difficult to resolve with empirical antibiotics treatment, a clinician should consider NTM infection.

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