

CLINICAL IMAGE

Importance of ultrasound examination: A case of peritoneal catheter tunnel infection

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Abstract

Some peritoneal dialysis catheter infections cannot be detected via a physical examination. Ultrasound of the PD catheter tunnel should be performed in cases of suspected infection or clinical abnormality at the catheter tunnel site.

KEYWORDS

cutaneous abscess, peritoneal dialysis, peritoneal dialysis catheter infection

Peritoneal catheter tunnel infection causes peritoneal dialysis (PD)-related peritonitis and technical failure. Peritoneal catheter tunnel infection can be difficult to diagnose on physical examination. Therefore, if tunnel infection is suspected, ultrasonographic examination of the catheter tunnel is recommended.^{1,2}

A 57-year-old man with stage 4 lung cancer on PD for 10 months exhibited a cutaneous nodule on his abdomen. A cutaneous nodule with skin redness was observed near the PD catheter but was not attached to it (Figure 1). The catheter's exit site was clear. Ultrasonography showed a hypoechoic zone around the catheter attached to the cutaneous nodule just under the skin, as revealed via an intense power Doppler signal (Figure 2). Since no external cuff infection was detected, tunnel infection was grade B based on ultrasonography findings.³ Needle puncture was performed on the nodule, and *Corynebacterium spp.* was detected via a pus culture. We diagnosed a cutaneous abscess related to the peritoneal catheter tunnel infection. Subsequently, minocycline (200 mg/day) was started. After 2 weeks, the skin lesion was cured. The patient



FIGURE 1 1 cm × 2 cm area of cutaneous nodule surrounded by skin redness

continued minocycline for 4 weeks. Three weeks after the discontinuation of minocycline, he died because of respiratory failure owing to lung cancer. There was no recurrence until he died.

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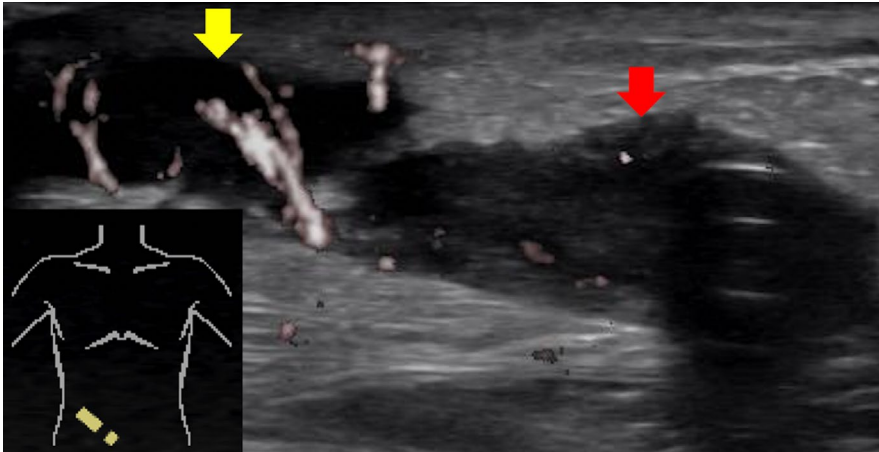


FIGURE 2 Ultrasound image shows the peritoneal dialysis catheter and hypoechoic zone around the catheter (indicated by the red arrow). Spread of the peri-catheter collection toward the abscess. The abscess exists just under the skin (indicated by the yellow arrow). The intense power Doppler signal indicates abundant blood flow

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CONFLICTS OF INTEREST

The authors have no conflicts of interest to declare.

AUTHOR CONTRIBUTIONS

YN: served as a corresponding author and was involved in the manuscript review, writing, and submission. TW, NT, and YF: served as co-authors and were involved in the manuscript review.

ETHICAL APPROVAL

This article does not contain any study performed by any of the authors, involving human participants or animal subjects.

CONSENT


Written informed consent was obtained from the patient's family to publish this report in accordance with journal's patient consent policy.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are not publicly available due to privacy or ethics restrictions;

however, they are available on request from the corresponding author.

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