

Cutaneous abscess related to peritoneal catheter tunnel infection

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Abstract

Some peritoneal dialysis catheter infections cannot be detected via a physical examination. Ultrasonography can aid in the diagnosis of such infections.

Title: Cutaneous abscess related to peritoneal catheter tunnel infection

Yoshihiro Nakamura^{1,*}, Tsuyoshi Watanabe¹, Naoho Takizawa¹, Yoshiro Fujita^{1,2} ¹Department of Rheumatology and ²Department of Nephrology Chubu Rosai Hospital, 2-10-15, Komei-cho, Minato-ku, Nagoya, Aichi 455-8530, Japan * Correspondence: Yoshihiro Nakamura, Department of Rheumatology, Chubu Rosai Hospital, 1-10-6, Komei-cho, Minato-ku, Nagoya 455-8530, Japan E-mails: nakamurashift@yahoo.co.jp (YN) tsuyoshiwatanaberhythm@yahoo.co.jp (TW) ttkkzzww5959@gmail.com (NT) hujitay@gmail.com (YF) Abstract Some peritoneal dialysis catheter infections cannot be detected via a physical examination. Ultrasonography can aid in the diagnosis of such infections. Keywords: peritoneal dialysis, peritoneal dialysis catheter infection, cutaneous abscess Peritoneal catheter tunnel infection causes peritoneal dialysis (PD)-related peritonitis and technical failure. It is sometimes difficult to diagnose peritoneal catheter tunnel infection on physical examination. Therefore, if tunnel infection is possible, ultrasonographic examination of the catheter tunnel is recommended.^{1,2} We examined a 57-year-old man on PD for 10 months exhibiting 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). Exit site of the catheter 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). 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, treatment using minocycline was started, with a dose of 200 mg/day. After two weeks, the skin lesion was completely cured. The patient continued to take minocycline for four weeks. There was no recurrence after minocycline discontinuation. Thus, ultrasonography can aid in the diagnosis of PD catheter infections even if such infections cannot be detected via a physical examination. **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. Acknowledgement We express our sincere thanks to Dr. Shigehisa Koide for giving us constructive comments and warm encouragement. **Compliance with ethical standards** **Conflict of interest** The authors have declared no conflict of interest exist. **Ethics approval** This article does not contain any study with human participants or animal subjects, which was performed by any of the authors. **Informed consent** An informed consent form was signed by the patient. **Funding Details:** We received no specific grants for this work.

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FIGURE/VIDEO CAPTIONS

Figure 1. A 1×2 cm area of cutaneous nodule surrounded by skin redness. Figure 2. Ultrasound image shows the PD catheter and hypoechoic zone around the catheter (indicated by the red arrow). Spread of the peri-catheter collection toward the abscess. The abscess, shown with intense power Doppler signal, exists just under the skin (indicated by the yellow arrow).

