cephalosporinase activity that is resistant to ceftazidime (10), the strain isolated from our patient was susceptible to cephalosporins and aminoglycosides. Our experience suggests that *H. alvei* peritonitis can be successfully treated with appropriate intraabdominal antibiotics and removal of the Tenckhoff catheter may not be necessary. Other adjunctive measures include improvement of nutritional status with parenteral feeding. Given its gastrointestinal origin, sigmoid diverticulitis has been reported linked to *Hafnia* bacteremia (1). We therefore believe that it might also be worthwhile to look for intestinal pathology in patients with *Hafnia* peritonitis.

**DISCLOSURE**

The authors have no financial conflict of interest to declare.

**REFERENCES**


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**Development of Pilonidal Sinus in an Old Exit Site Four Years After Removal of the Tenckhoff Catheter**

**Editor:**

Tenckhoff catheters are removed after conversion to hemodialysis and following successful renal transplantation. Infection and problems with wound healing are uncommon after removal of the catheter. We recently encountered an interesting case presenting with discharge and sinus formation in an old exit site as late as 4 years after the catheter had been removed.

A 34-year-old man with end-stage renal failure due to chronic interstitial nephritis of unknown origin was commenced on peritoneal dialysis (PD) in 2002. He remained on PD without any infectious complications until he received a first renal transplant from a deceased donor in 2004. Transplant function was good and the silicone elastomer K-flow Tenckhoff catheter (adult, coiled, 2 cuff, code K50/41; Kimal plc, Middlesex, UK) was removed uneventfully. The “pull” technique (1) was used for removal. Four years later, the patient presented with a 4-month history of purulent discharge from the former exit site. This had not resolved despite a prolonged course of oral antibiotic therapy. Examination revealed a small sinus tract and an area of chronic inflammation.

An excision biopsy was performed: the specimen consisted of an area of skin 13 × 7 mm wide and 38 mm deep, lined by squamous epithelium and containing fragments of hair. Surrounding the sinus tract, there was a chronic inflammatory infiltrate with hair shafts surrounded by foreign-body giant cells (Figure 1). A diagnosis of pilonidal sinus was made. The lesion healed well and a deeply cicatrized scar remained.

Pilonidal cysts consist of a foreign-body inflammatory reaction around hair fragments. The word pilonidal...
originates from the Latin words pilum (hair) and nidus (nest). The disorder commonly occurs in the sacrococcygeal area (2) while other sites, such as axilla, umbilicus, and penis, are rarely reported (3–5). There is a male:female preponderance of 3:1 (6) and the condition is most common in the third decade of life (7). The etiology of the disease remains controversial. A congenital disorder was originally assumed and persistent remnants of the neural canal were postulated. More recently, the disease has been believed to be due to repeated trauma with entry of hair and cellular debris into skin, leading to a foreign-body type inflammatory reaction (8). These pilonidal cysts eventually rupture, with development of a pilonidal sinus. There is a spectrum of presentation from asymptomatic cystic lesions to an acute abscess or chronic discharge. The development of malignancy is rare (9). Treatment of simple lesions can be performed by careful removal of the hair. More commonly, however, incision and drainage or surgical excision is required.

Late complications after removal of the PD catheter are rare. There are no contemporary large series but older reports describe an incidence of 4.3%, with late infections and abscess due to retained cuff material (10). There have been case reports of pilonidal sinus occurring in the umbilicus but, to our knowledge, it has not been reported in association with PD. One differential is formation due to a retained foreign body. This may in fact be a more common underlying cause than pilonidal sinus. Our patient is unusual in that he presented so late after removal of the catheter although, in a historical series, the mean time to develop an abscess after removal of the PD catheter was 541 ± 143 days (10). We assume that development of pilonidal sinus within the old exit site is not coincidental. We speculate that micro-trauma involving hair was caused while the PD catheter was still in situ or that hair was trapped within the scar after catheter removal. The immunosuppression after renal transplantation may explain the late presentation.

We report the first case of a pilonidal sinus arising from the former exit site years after removal of the Tenckhoff catheter. This report highlights that pilonidal sinus, although rare, is a possible cause for discharge from a former PD exit site.

DISCLOSURE

There is no conflict of interest and no connection whatsoever with Kimal, the manufacturer of the catheter in question, or its competitors.

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Editor:

We read with interest the letter by Tapiawala and Bargman (1) about an unusual cause of skin ulceration in a very long-term peritoneal dialysis (PD) patient. We would like to add our experience with a similar situation of a skin ulcer on the peritoneal catheter subcutaneous portion in a polycystic patient.

Our patient, a 64-year-old man with end-stage renal disease due to polycystic kidney disease, had been on continuous ambulatory PD for 3 years. The patient’s underlying problems included severe hypertensive myocardiopathy, ischemic heart disease, and a severe peripheral vascular disease. During a routine visit after 3 years and 6 months on PD, physical examination showed serous drainage from the exit site, cutaneous redness on the external catheter cuff, and a little skin ulcer localized 3 – 4 cm from the exit site on the catheter tunnel (almost identical to Tapiawala’s patient). The catheter was visible through this ulcer but communication between the sore and the exit site was not apparent. The skin around the ulceration was normal in appearance with no discharge. Exit-site cultures were positive for Staphylococcus aureus and therapy with appropriate antibiotics was indicated. Initially, we tried to suture the ulceration but the wound healing was bad and a new ulceration appeared on the external cuff (Figure 1). We proceeded to make an incision between the exit site and the skin ulcer, exteriorizing and removing the superficial cuff, and establish a new exit site at the low medial side of the wound (Figure 2). No major complication was noted postoperatively and PD continued uneventfully.

Among the uncommon complications of PD, delayed decubitus perforation of a viscus is explained by the intimate contact between the peritoneal catheter and the viscus (2–4). This continuous pressure causes localized ischemia, leading to the formation of a decubitus erosion or a frank perforation. Theoretically, the same pathogenic mechanism may occur at the PD catheter tunnel, where the immobility of the subcutaneous segment causes prolonged pressure. Mean skin capillary pressure is approximately 25 mmHg in healthy people. Compression with pressures > 30 mmHg will eventually occlude the blood vessels so that the surrounding tissues become anoxic and cell death occurs. The necrotic tissue breaks down, revealing an ulcer. Reduced tissue oxygenation induced by pressure is the main determinant of ulcer formation but the amount of pressure and time necessary for damage may be shortened by a number of identified risk factors, such as immobility or limited activity, increased age, poor nutritional status, affected tissue perfusion, and diminished pain sensation (5). Our patient suffered some of these risk factors. The skin pressure ulcer staging systems (5) will not help the clinician in situations such as that presented here because, in this case, the lesion progressed upward and a reddened area can be the sign of deep tissue damage. Moreover, although the initial general management of skin decubitus ulcers uses local treatment, in the PD setting, surgical...