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Foreign Body Reaction due to a Retained Cuff from a Central Venous Catheter

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Dear Editor:

Foreign body reaction is a tissue response to extraneous materials such as injected materials or implanted medical devices[1]. Here, we report a unique foreign body reaction caused by a retained cuff from a central venous catheter.

A 63-year-old male patient with a history of end-stage renal disease presented with an asymptomatic, firm mass on the right chest for several months. One year ago, because of swelling and tenderness on the continuous ambulatory peritoneal dialysis (CAPD) catheter site, his CAPD catheter was removed, and a hemodialysis (HD) catheter was inserted through the right internal jugular vein. The CAPD catheter was reinserted after 2 weeks, and the HD catheter was removed by manual traction after 2 months. The patient visited our clinic with a 2 cm, skin-colored, subcutaneous mass on the right chest (Fig. 1). On incisional biopsy, there was an odorous, pus-like drainage and pieces of foreign material (Fig. 1). Histological examination showed groups of fibers with adjacent granulation tissue (Fig. 2). He was referred to the Department of General Surgery, and the catheter remains were completely removed. He had no complications.

Venous access catheters are used for treatments such as HD and chemotherapy. Many catheters have polyester cuffs at the end for anchorage to the subcutaneous tissue. The catheters can be removed by traction or with a cutdown procedure[2,3]. When catheters are removed by traction, parts of the cuffs can break off and be retained in the subcutaneous tissue in 10%～50% of cases[2]. The reported complications of retained cuffs include infection, abscess, discharge, and delayed healing[2,3]. Our patient had an odorous, pus-like drainage; however, we did not perform bacterial culture or Gram stain. Antibiotics were given, and the wound site healed without complications.

Retained cuffs are clinically insignificant unless infection occurs[2-4]. In a study by Kohli et al.[3], 428 cuffed central venous catheters were removed by traction, and catheter cuffs were retained in only 41 (10%) of the patients. Of

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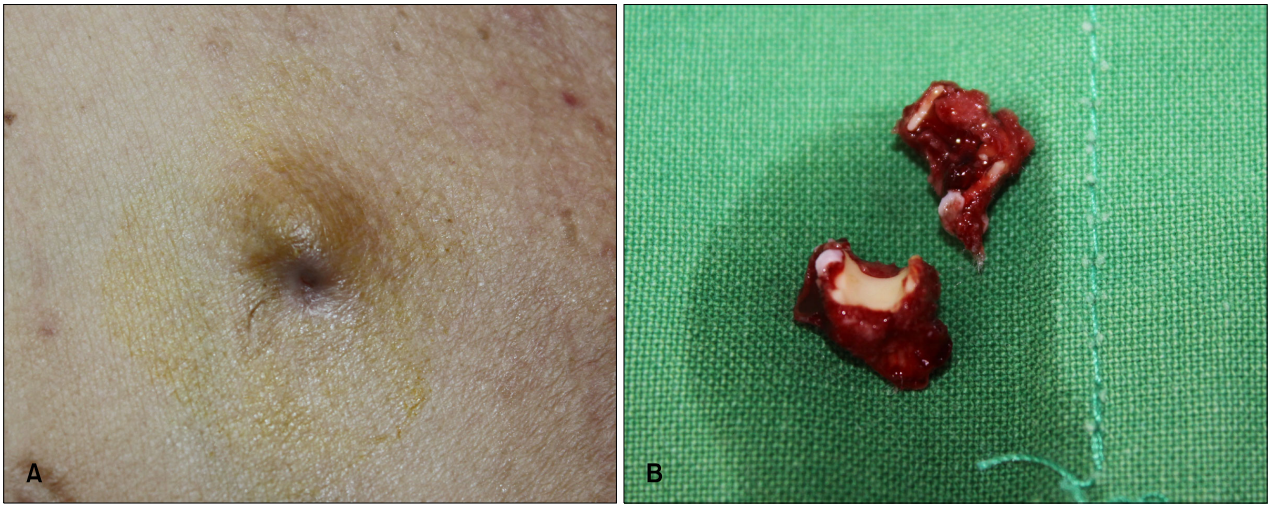

Fig. 1. (A) A solitary, 2 cm-sized, firm, skin-colored subcutaneous mass on the right chest. (B) Great chunks of pieces of foreign material (catheter cuff) identified during biopsy.

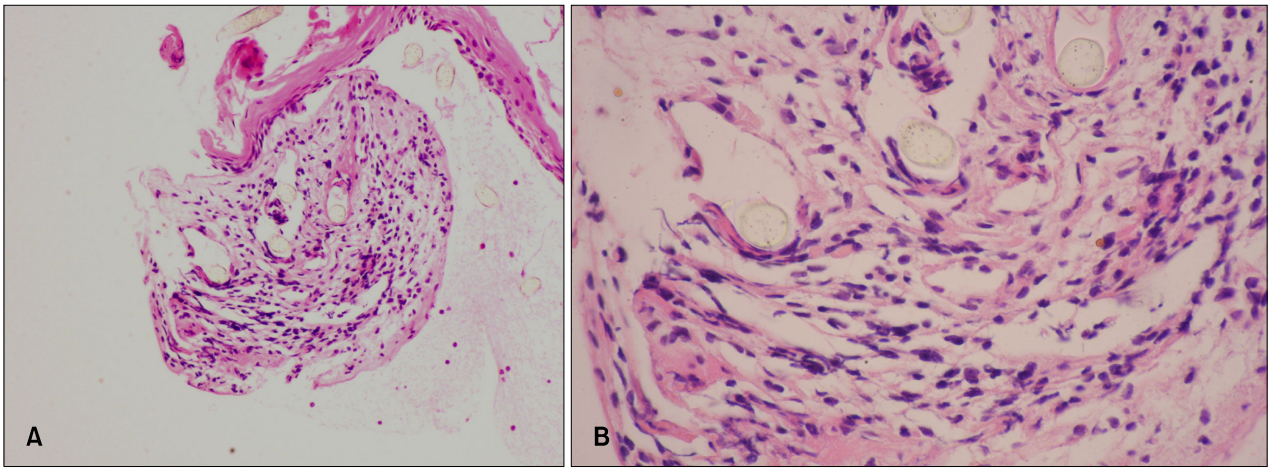

Fig. 2. (A) Histopathology showing foreign body from the catheter cuff with adjacent granulation tissue (H&E, ×100). (B) Higher magnification view showing a granulomatous reaction with lymphocytes, histiocytes, multinucleated giant cells, and polyester fibers from the catheter cuff (H&E, ×400).

these 41 retained catheter cuffs, only 3 required removal. One was removed because the cuff migrated to the exit site, inhibiting healing. The other two were removed because of persistent erythema and swelling at the cuff site and for cosmetic purposes[3,4]. Currently, catheter manufacturers recommend removing all retained cuffs with a cutdown procedure[2-4]. However, while retained cuffs rarely cause problems, the cutdown procedure has risks of infection and scarring[3,4]. Therefore, as the risks associated with the cutdown procedure are greater than those of non-removal of the retained cuffs, Kohli et al.[3] recommend leaving behind the retained cuffs[3,4]. In our case, owing to the patient's request, the retained cuff resulting from traction removal was completely removed by using a cutdown procedure, and there were no complications.

In the Korean literature, there have been many cases of foreign body reactions due to materials such as fillers, and bee sting; however, there has been no reported case due to catheters[5]. We report this as a rare case of a foreign body reaction caused by a retained cuff from a central venous catheter.

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A Case of Reticulate Acropigmentation of Kitamura Treated with 532-nm Q-Switched Nd:YAG Laser: 10 Years of Follow-Up Observation

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Dear Editor:

Reticulate acropigmentation of Kitamura (RAPK) is an uncommon pigmentary disorder that was first reported in Japan[1]. Since then, similar cases have been described worldwide; nevertheless, most were still in Japanese patients[2]. RAPK shows reticulate hyperpigmentation of the dorsum of the acral areas without hypopigmented macules. Despite the report of using 20% azelaic acid to treat RAPK, there has been no certain treatment guaranteeing a clinical effect for more than half a century[3]. Herein, we present a patient with RAPK who was successfully treated with 532-nm Q-switched Nd:YAG laser (532-nm QSND; MedLite IV Nd:YAG laser; HOYA ConBio, Fremont, CA, USA).

A 29-year-old Korean woman visited our dermatologic clinic for childhood-onset acral hyperpigmentation in March 2002. Reticulate acral hyperpigmentation was recognized but no interspersed hypopigmentation was detected. She had no family history of pigmentary disorder. She neither had taken medication known to induce hyperpigmentation nor had a history of contact to any chemical agent that can cause pigmentary changes. She underwent skin biopsies for the hyperpigmented confluent patch on the dorsum of the hand and discrete hyperpigmented macule on the dorsum of the foot. Histologically, lentiginous melanocytic hyperplasia and some dermal melanophages were observed with mild epidermal atrophy (Fig. 1). On the basis of the findings, we made a diagnosis of RAPK. Considering the histologic findings of superficially situated melanocytic hyperplasia, we used 532-nm QSND. We tested the laser to evaluate its efficacy and safety. A small area of the left arm was selected as the test area. Topical anesthetic agent was applied on the area before treatment. Treatment with parameters of 4-mm spot size, 2 J/cm^2 was applied. Some pain was present during treatment but it was tolerable, and significant clinical

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