Direct Percutaneous Embolization of a Lymphocutaneous Fistula

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Abstract

Lymphocutaneous fistula is a rare clinical condition and presents both a diagnostic and a therapeutic challenge. The authors report a case of secondary lymphocutaneous fistula that was undiagnosed and untreated on several occasions but was successfully treated with direct percutaneous embolization.

Keywords
- lymphatic
- fistula
- intervention

Introduction

Lymphocutaneous fistula is a rare clinical condition. It presents both a diagnostic and a therapeutic challenge. The condition is often missed or goes undiagnosed. It is associated with reduced quality of life. We report a case of secondary lymphocutaneous fistula that was undiagnosed and left untreated on several occasions but was successfully treated with direct percutaneous embolization.

Case Report

An 83-year-old male patient presented to us with complaints of a wound in the right groin since the past 4 months. The wound was associated with a discharge of a clear and odorless fluid with soakage of approximately 8 to 10 dressing pads per day. These complaints were also associated with weight loss (~6–8 kg), social anxiety, limited and reduced social interaction, and depression. This was, however, not associated with fever, pain, or blood-tinged discharge. The patient gave a past history of undergoing an incision and drainage procedure for a swelling in the right groin about 4 months back following which the patient developed this wound. Initially, the wound was managed conservatively by reassuring the patient. On the persistence of the complaint, the treating surgeon first attempted compression dressings and a few days later tried negative-pressure dressings both of which did not resolve the condition. The patient and his family did some research on this disease and with a probable diagnosis of a lymphocutaneous fistula in mind approached our interventional radiology team through the Internet.

On clinical evaluation, a 1 × 0.5-cm wound was noted in the right thigh approximately 3 cm below the right groin margin. The wound had an excoriated margin and was associated with a serous discharge. On ultrasound examination, a small 1.1 × 3.3-cm hypoechoic focus with internal echoes was seen in the area of concern with a tract extending up to the external wound (►**Fig. 1**). The focus was seen adjacent to the superficial inguinal lymph node. A direct percutaneous embolization was planned. Under fluoroscopic and ultrasound guidance, a 24G needle was placed in the center of the hypoechoic focus, and 10 cc of Lipiodol (Iodinated glycerol ester, Lipiodol Ultra-Fluid, Guerbet GmbH) was injected followed by a saline flush. The lymphatic system was well-delineated post Lipiodol injection (►**Fig. 2**). The needle was withdrawn, and a tight compression bandage was applied at the site of the wound. A follow-up was performed at 4 weeks, which showed sealing of the external wound with no discharge from the site post-procedure (►**Fig. 3**).

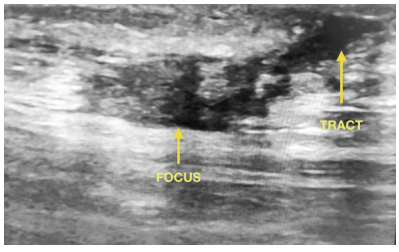

Fig. 1 A small 1.1 × 3.3-cm hypoechoic focus (arrow) with internal echoes is seen with a tract (arrow) extending up to the external wound.

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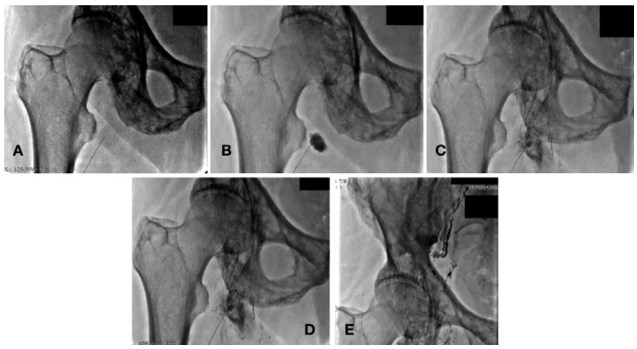

Fig. 2 (A–E) Angiographic images showing serial phases following local injection of Lipidol within the focus with visualization of right-sided lymphatic system.

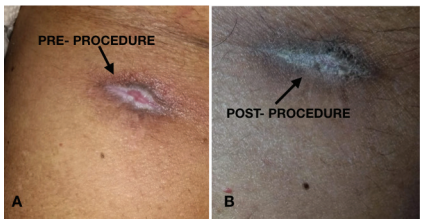

Fig. 3 (A, B) Pre- and post-procedure wound status. (**B**) shows a healed wound compared with (**A**).

Discussion

Lymphocutaneous fistulas can be primary or secondary. Secondary lymphocutaneous fistulas occur due to surgery or interventional procedures. The incidence of the condition ranges between 0.5 and 6%.[1–4] In the past, lymphoscintigraphy and intraoperative dye injection have been used to delineate the anatomy and site of leak. Lohrmann et al reported the advantage of magnetic resonance lymphangiography in their series of four patients with lymphocutaneous fistula.[5] Lymphangiography has been reported as an effective treatment option in patients with lymphatic leakage.[6,7] Kos et al reported an occlusion of 73.3% in patients with secondary lymphatic leakage following lymphangiography.[7]

The review of literature has shown only one case report of a patient treated by intervention for a similar complaint of lymphocutaneous fistula.[8]

Conclusion

Early diagnosis and intervention for lymphocutaneous fistula are very important. Lymphangiography with Lipiodol can be both diagnostic and therapeutic. This intervention is safe, very effective, and can be repeated if required.

Conflict of Interest

None.

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