A Case of Left Groin Lymphocele Postoperatively

Abstract

Many surgical procedures may injure lymphatic channels unexpectedly, such as lymph node dissections, transplantations, and vessel reconstructions, and will lead to iatrogenic lymphatic leakage. We hereby present a case of postoperative lymphocele diagnosed more precisely by single-photon emission computed tomography (SPECT)/CT fusion imaging.

Keywords: *Lymphocele, lymphoscintigraphy, single-photon emission computed tomography-computed tomography imaging*

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Introduction

Lymphocele is a postsurgical complication that develops when the lymphatic system gets damaged during surgery. This damage causes the lymph fluid to drain out from the lymphatic channel and then build up in a nearby cavity. Lymphocele, which is most commonly associated with extensive surgical procedures, such as kidney transplantation and urological pelvic surgery, is usually found in the retroperitoneal space. If not treated on time, lymphocele can obstruct blood flow to the treated site and compress surrounding blood vessels. Poor blood supply delays wound healing and increases the risk of infection.

A 62 years old male presented with history of pain and swelling in left groin since last three months following blood exchange incision for the open-heart surgery. Subsequently, a seroma has been formed in the left groin region; this was aspirated on four occasions, but swelling did not resolved; and the fluid was sent to culture and sensitivity and was suspected to be lymphatic origin (lymphocele) rather than seroma. 99mTc-nanocolloid lymphatic scan of the lower limb was performed after subcutaneous tracer injection in between first and second toe on either side and subsequent half body image was obtained immediately at 10 min, 2.0 h, 5 h, and 24 h, respectively, and single-photon emission computed tomography (SPECT)-CT fused images were obtained at 5 h of the pelvic region.

- Right lower limb and pelvis – Lymphatic drainage is well seen through normal as well as through the collaterals (especially in leg region) along with visualization of inguinal, pelvic, and aortic lymph nodes (as started seeing 10 min onward images)
- Left lower limb and pelvis – Lymphatic drainage is well seen through normal as well as through abnormally appeared collaterals (especially in leg region, where some stasis of the tracer seen even on delayed 24 h images) along with visualization of inguinal and pelvic lymph nodes (which, as compared to opposite side, are reduced in number and show relatively reduced in tracer uptake in intensity (decreased functional reserve) [Figures 1 and 2].

In addition to this, there is abnormal (lymph) tracer accumulation started seeing within 10 min of the images and persistently seen even on delayed 2, 5, and 24 h images, respectively, without showing any significant onward flow of the tracer (lymph) in the left groin region (which measures approximately craniocaudal 8.7 cm, transverse 6.5 cm, and anterior posterior 4.5 cm in diameter) and this is seen at the site of previous surgery procedure (surgical clips noted) as appreciated in the SPECT-CT fused images, suggesting lymphocele [Figures 3-5].

Discussion

Lymphoceles occur when afferent lymph vessels are disrupted and lymph fluid accumulates in a potential space without a distinct epithelial lining.[1] Lymphatic

How to cite this article: Shikare SV, El-Hakeem A. A case of left groin lymphocele postoperatively. Indian J Nucl Med 2020;35:181-4.

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Received: 06-11-2019
Revised: 28-11-2019
Accepted: 03-12-2019
Published: 12-03-2020.

Access this article online

Website: www.ijnm.in

DOI: 10.4103/ijnm.IJNM_194_19

Quick Response Code:

complications after femoral arterial reconstructive operations are common, and groin lymphoceles are estimated to develop in 1.5%–8% patients, depending on surgical technique.[2,3] Lymphocele often occurs within 3–8 weeks or 1 year occasionally after surgeries.[4] Because of self-limiting, most of the postoperative lymphocele is usually asymptomatic, undiagnosed, and self-healing without any treatments.[5,6] Only 4%–7% of the postoperative lymphocele is symptomatic[4] due to self-absorption disorder. The mean diameter of a

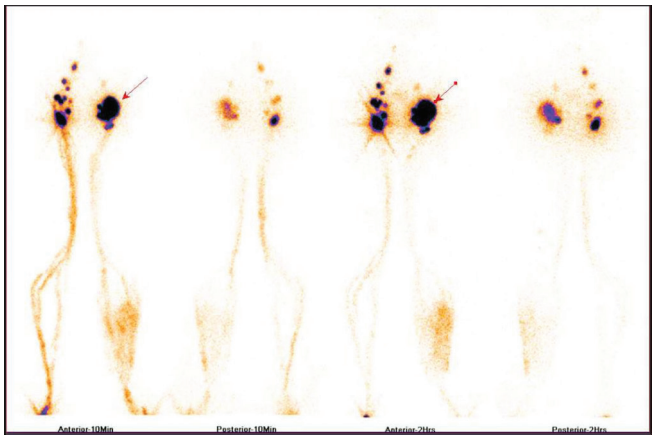

Figure 1: Static 10 min and 2 h images showing focal area of abnormal tracer accumulation in the left groin region (arrows)

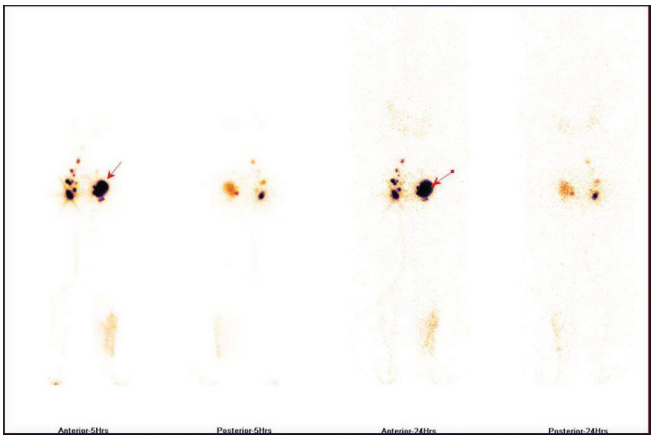

Figure 2: Static 5 and 24 h images showing large focal area of tracer accumulation in the left groin region (arrows)

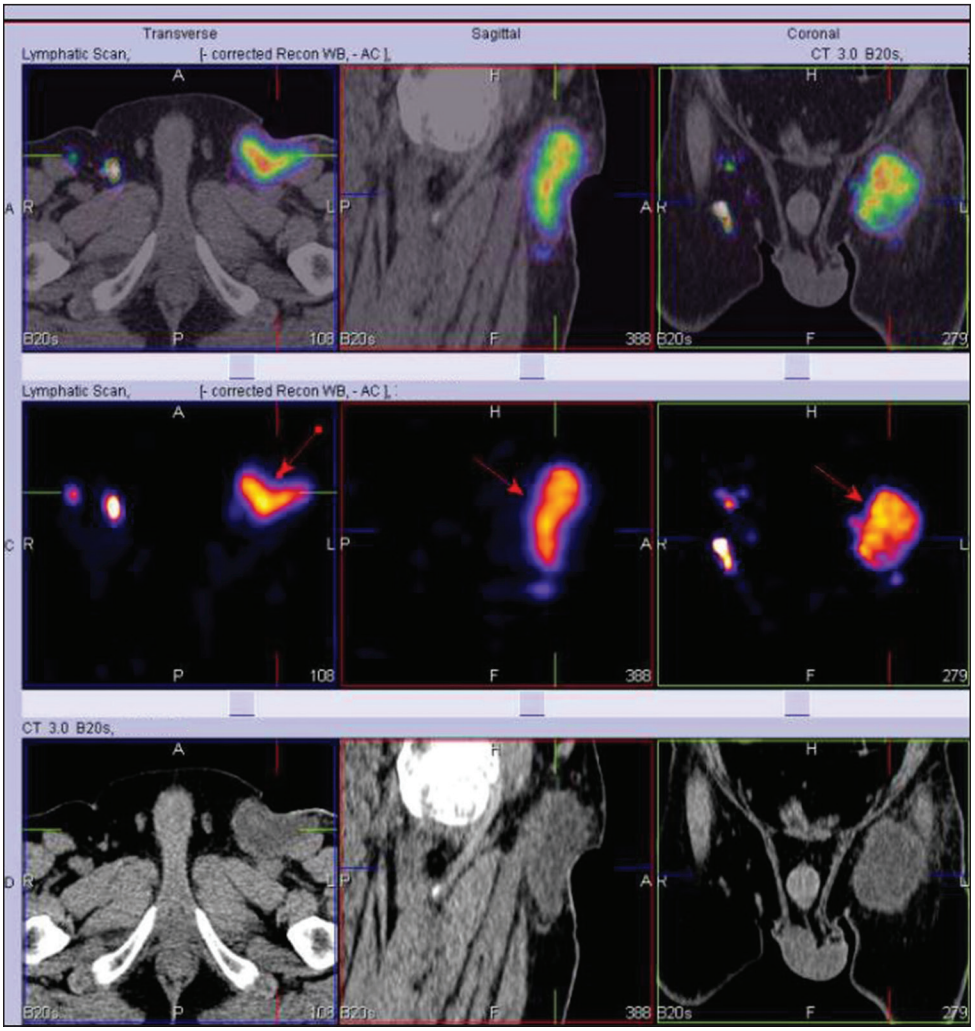

Figure 3: Single-photon emission computed tomography-computed tomography fused images showing lymphocele in the left groin region (arrows)

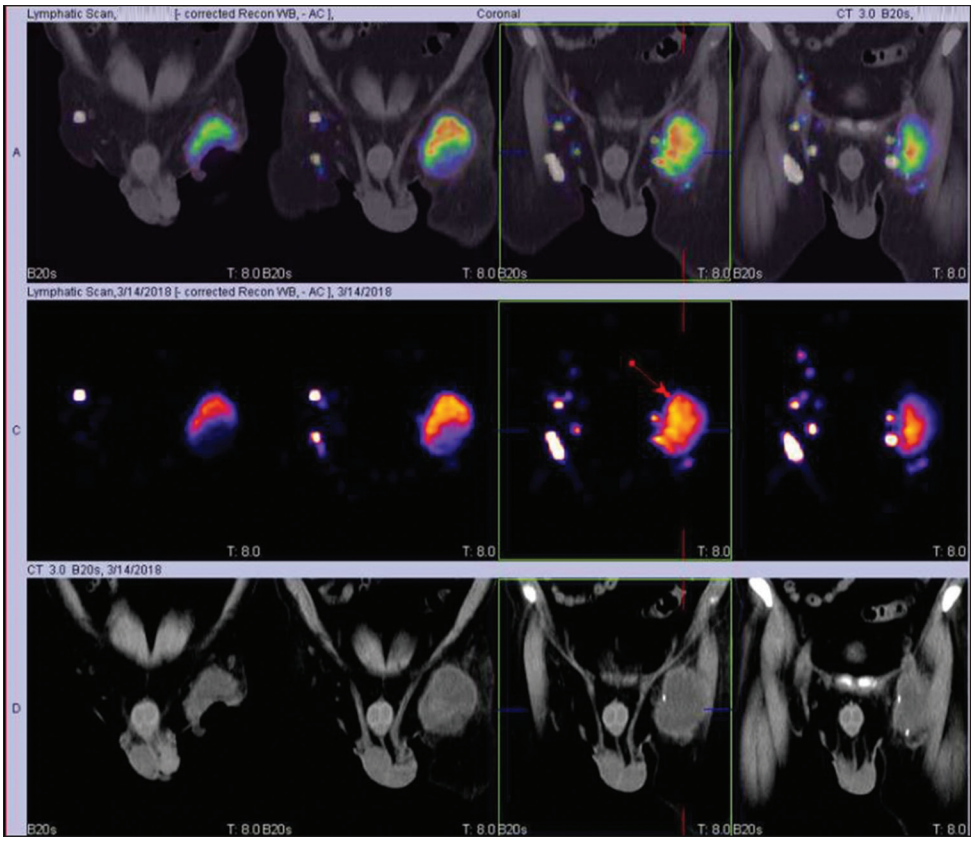

Figure 4: Single-photon emission computed tomography-computed tomography fused images showing large lymphocele in the left groin region (arrow)

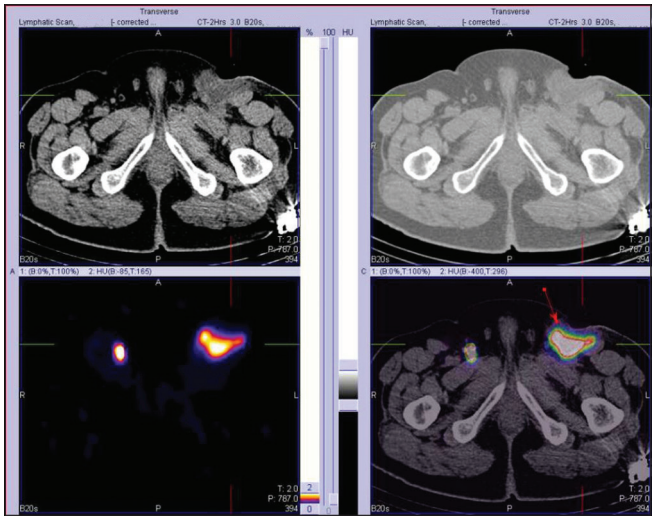

Figure 5: Single-photon emission computed tomography-computed tomography fused images showing large lymphocele in the left groin region

symptomatic lymphocele is usually more than 5 cm.[4] Moreover, it will require some interventions[5] when pain, infection, lymphorrhea on the fresh wound, or compression of vital structures occurs.[7] Inguinal lymphocele is also a well-known complication of inguinal lymph nodes dissection for penile and vulvar cancer, with an incidence ranging from 5% to 87%.[8,9] Lymphoscintigraphy with adjunct use of SPECT/CT fused imaging is a useful and safe tool for the diagnostic evaluation of a suspected lymphocele postoperatively as demonstrated in our case. In this case, we have demonstrated lymphocele in the left groin region postoperatively by lymphoscintigraphy and more precisely by SPECT-CT fused imaging.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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