

A Potential Pitfall Associated with F-18 FDG Imaging: Undescended Testis Mimicking Inguinal Lymph Node in a Patient with Lymphoma: Original Image

F-18 FDG Görüntüleme ile İlişkili Potansiyel Bir Tuzak: Lenfomalı Bir Hastada İnguinal Lenf Nodunu Taklit Eden İnmemiş Testis

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ABSTRACT Undescended testis (UDT) is defined as a testis which cannot be brought into a stable scrotal position. We hereby present the UDT mimicking inguinal lymph node in a patient with lymphoma.

Key Words: Cryptorchidism; fluorodeoxyglucose F18; positron-emission tomography

ÖZET İnmemiş testis, stabil scrotal pozisyonuna gelmemiş bir testis olarak tanımlanır. Burada, lenfomalı bir hastada inguinal lenf nodunu taklit eden bir inmemiş testisi sunuyoruz.

Anahtar Kelimeler: Kriptorşidizm; fluorodeoksiglukoz F18; pozitron emisyon tomografi

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Undescended testis (UDT) is defined as a testis which cannot be brought into a stable scrotal position. We hereby present the UDT mimicking an inguinal lymph node in a patient with lymphoma. A 59-year-old man with Non-Hodgkin's lymphoma (NHL) underwent F-18 FDG PET/CT scan to evaluate the chemotherapy response. F-18 FDG PET images showed a mild F-18 FDG uptake focus suggesting a residual lymph node in the right inguinal lymph node area (Figure 1). On CT and fusion PET/CT images, there was an ovoid lesion mimicking a lymph node (3 x 3 x 5 cm in size, SUV 2.3) in the right inguinal region. When examined carefully, right testis was absent in the scrotum and the lesion suggesting lymph node was the undescended right testis located in the inguinal canal (Figure 2). On clinical examination, the right testis was nonpalpable and there was a mass (3 x 5 cm in size) in the right inguinal region mimicking an inguinal lymph node.

UDT is defined as a testis which cannot be brought into a stable scrotal position. UDT is one of the most common congenital abnormalities of the genitourinary system in boys and it is the most frequent congenital malformation affecting 1% of 1-year-old mature birth boys. Although the testis can be located anywhere along the normal path of descent, the inguinal canal is the most common location for an UDT. UDT can be palpated in the

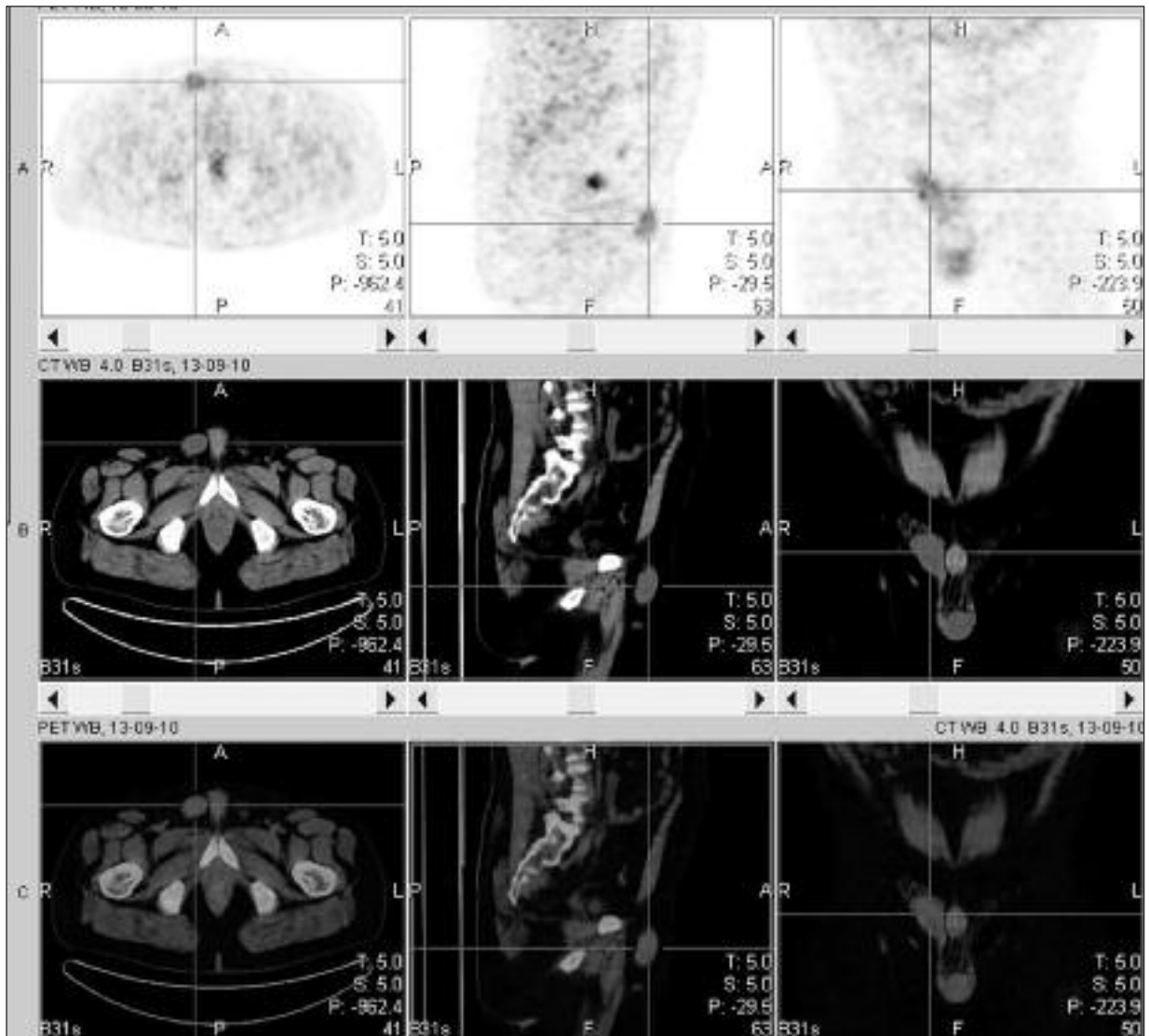


FIGURE 1: The patient was imaged using an integrated PET/CT camera (one hour after the administration of 465 MBq FDG), which consists of a 6-slice CT gantry integrated on a LSO based full ring PET scanner (Siemens Biograph 6, IL, Chicago, USA). F-18 FDG PET images show a mild F-18 FDG uptake focus suggesting a residual lymph node in the right inguinal lymph node area (top panel). On CT and fusion PET/CT images, there was a lesion mimicking a lymph node (3x3x5 cm in size, SUV 2.3) in the right inguinal region.

inguinal canal in 80% of cases; the remaining testis or testes are in the abdomen or truly “vanished”. UDTs are often atrophic, especially with increasing age or high location in the canal.¹⁻⁵

The interpretation of F-18 FDG imaging can be quite challenging, particularly on PET alone in a patient with a malignant disease.⁶⁻¹⁰ This case highlights a potential pitfall in F-18 FDG imaging, especially in the presence of a moderate F-18 FDG

uptake suggesting a partial chemotherapy response in patients with NHL. As in this case, simultaneous imaging of inguinal and scrotal region in combined PET/CT imaging has facilitated the description of F-18 FDG activity by allowing accurate anatomic localization and definition of the FDG uptake. Combined PET/CT has facilitated the descriptions of FDG uptake by allowing accurate anatomic localization and definition of the FDG uptake.

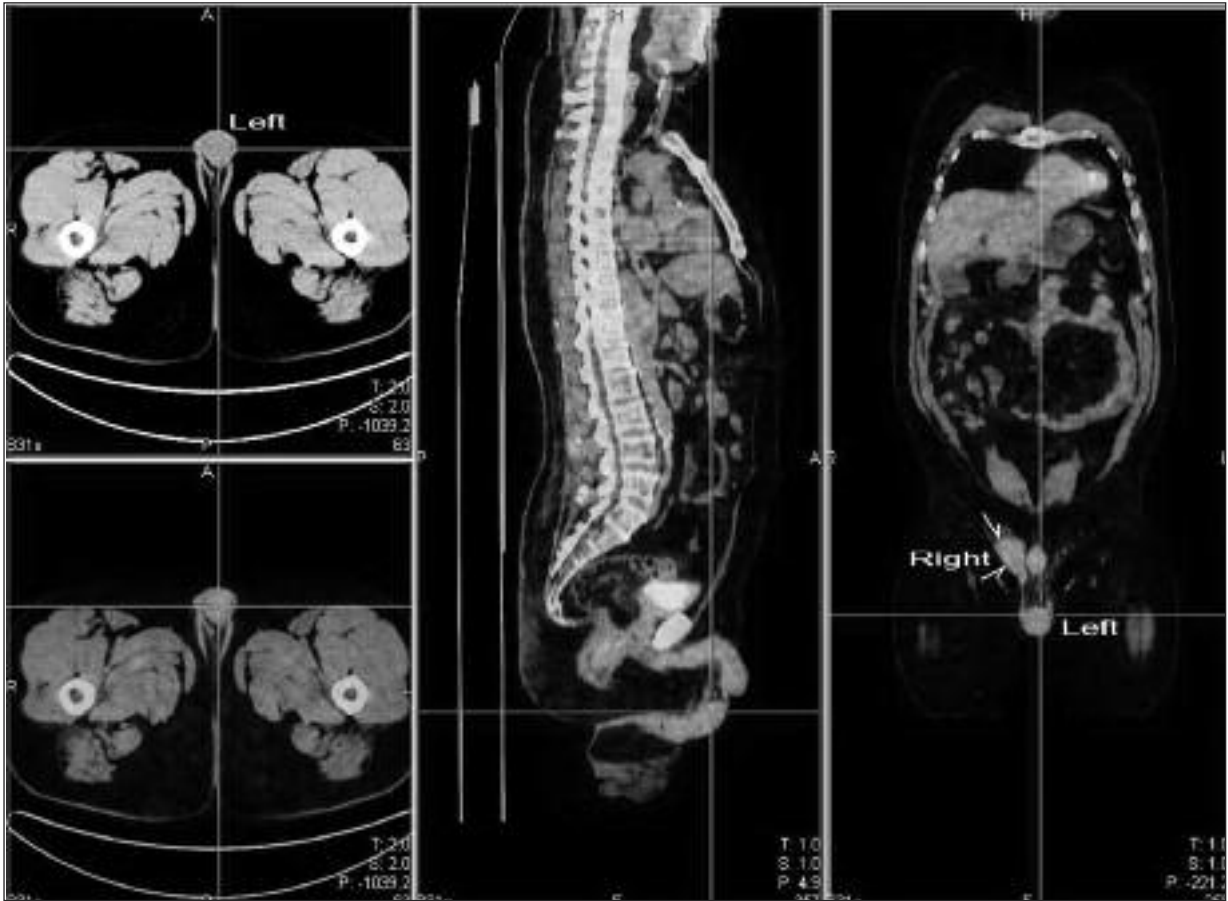


FIGURE 2: The figure shows that left testis is in the scrotum. The undescended right testis is localized in the right inguinal canal.

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