

Fluorine-18 Fluorodeoxyglucose Uptake in the Retractable Testis in an Adult Patient: Original Image

Erişkin Bir Hastada Retraktıl Testiste Flor-18 Florodeoksiglukoz Tutulumu

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ABSTRACT [18]F-Fluorodeoxyglucose (FDG) can accumulate in many benign neoplasms. Additionally, some organs normally may have increased FDG accumulation, including the brain, heart, kidney, and urinary tract. Here, we present a 47-year-old man with a diagnosis of Hodgkin's lymphoma. FDG PET/CT scan performed for therapy response showed increased tracer uptake in the right inguinal region. In comparison with previous scan performed three months ago for staging it was clearly seen that the testis was localised in the scrotum in the previous scan, the right testis was not seen in the scrotal area in the second scan. This finding was thought that mildly increased activity in the right inguinal region could be due to the retractile testis. A consultant urologist confirmed that right testis was retractile. If increased FDG activity is noted in the inguinal region consistent with testicular tissue in the corresponding CT slices, retractile testis could be included in the differential diagnosis.

Key Words: Fluorodeoxyglucose F18; positron-emission tomography; testicular diseases

ÖZET [18]F-Florodeoksiglukoz (FDG) birçok benign neoplazmda tutulabilir. Ayrıca beyin, kalp, böbrek ve üriner sistemi içeren birçok organ da normal olarak artmış FDG birikimi olabilir. Burada, 47 yaşında Hodgkin lenfomalı erkek bir hasta sunuyoruz. PET/BT'de FDG sağ inguinal bölgede ılımlı artmış tutulum göstermiştir. PET/BT çalışması üç ay önce evreleme için yapılan çalışmayla karşılaştırıldığında sağ testis önceki çalışmada skrotumda izlenirken, ikinci çalışmada skrotumda olmadığı gözlenmiştir. Bu bulgu inguinal alandaki ılımlı artmış aktivite tutulumunun retraktıl testise bağlı olabileceğini düşündürmüştür. Konsültan ürolog retraktıl testis olduğunu doğrulamıştır. İnguinal bölgede artmış FDG tutulumu mevcut ise retraktıl testis ayırıcı tanıya dahil edilmelidir.

Anahtar Kelimeler: Fluorodeoksiglukoz F18; pozitron emisyon tomografi; testis hastalıkları

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A 45 year-old man with nodular sclerosing Hodgkin's lymphoma was referred for Fluorine-18 fluorodeoxyglucose (FDG) PET/CT scan for therapy response. The scan was evaluated as good response to therapy except mildly increased activity in the right parotid and submandibular glands. In addition, mildly increased activity was noted in the right inguinal region (Figure 1A). This activity could not be observed in the previous scan which was performed three months ago for staging of the disease (Figure 1B). In comparing of the scans while it was clearly seen that the testis was localised in the scrotum in the first scan, the right testis was not seen in the scrotal area in the second scan (Figure 2). It was thought

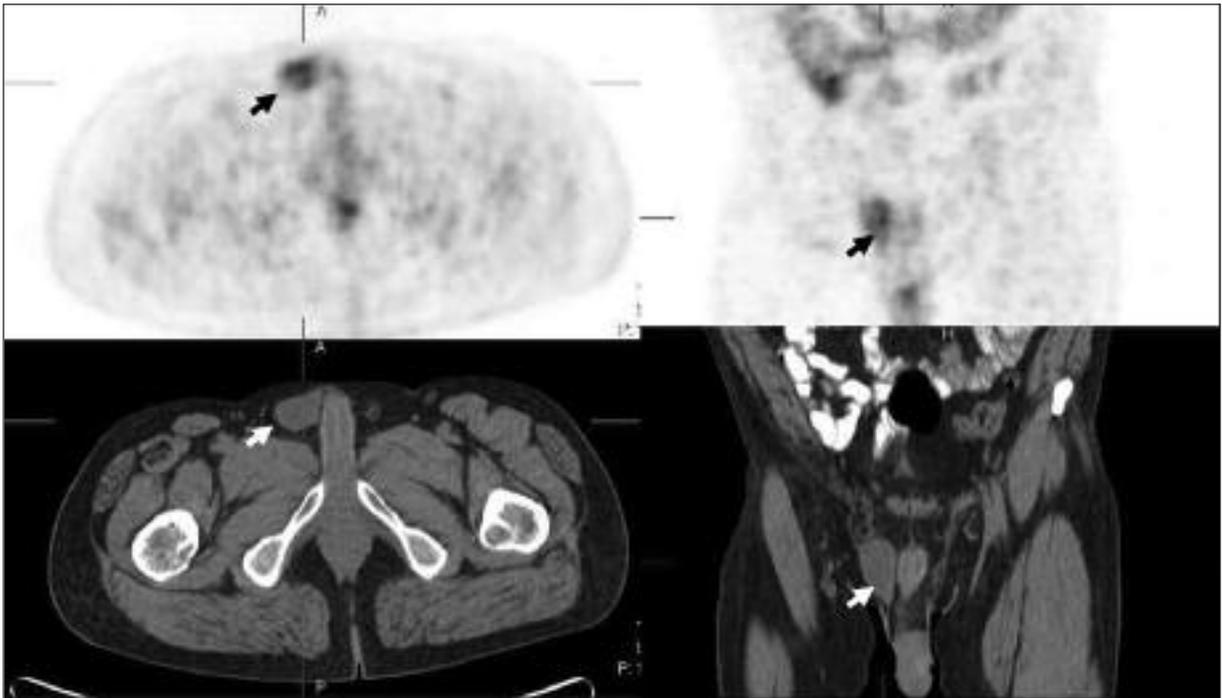


FIGURE 1A: Retractable testis showed increased FDG uptake in the right inguinal area.

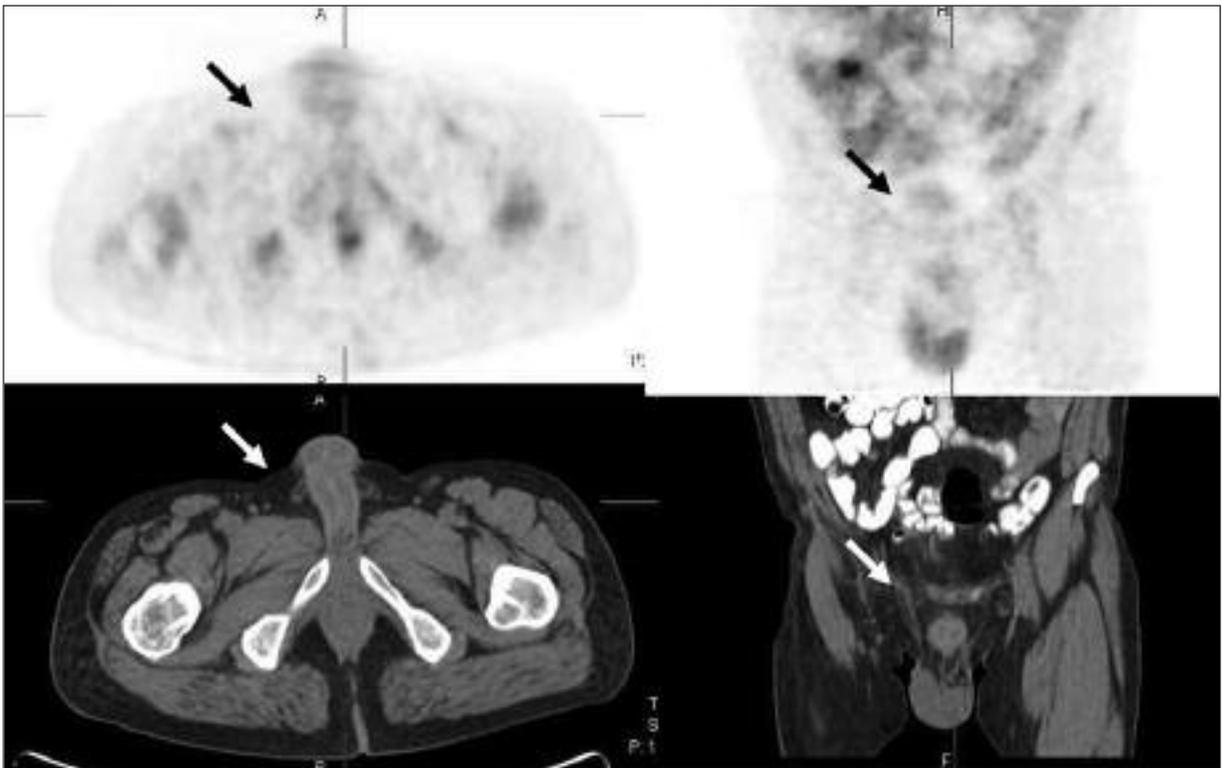


FIGURE 1B: There is no increased activity at the same location with figure 1 A in the first FDG PET examination.

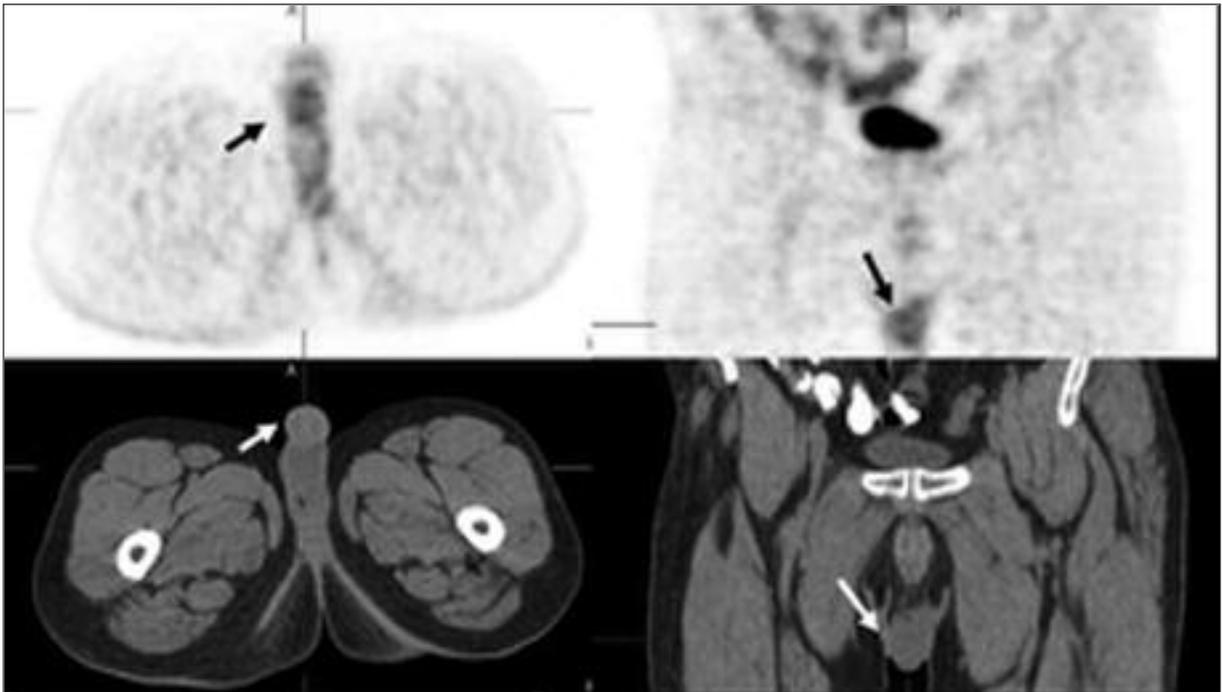


FIGURE 2A: Right testis (retractile testis) is not seen in the scrotum in the second PET/CT examination.

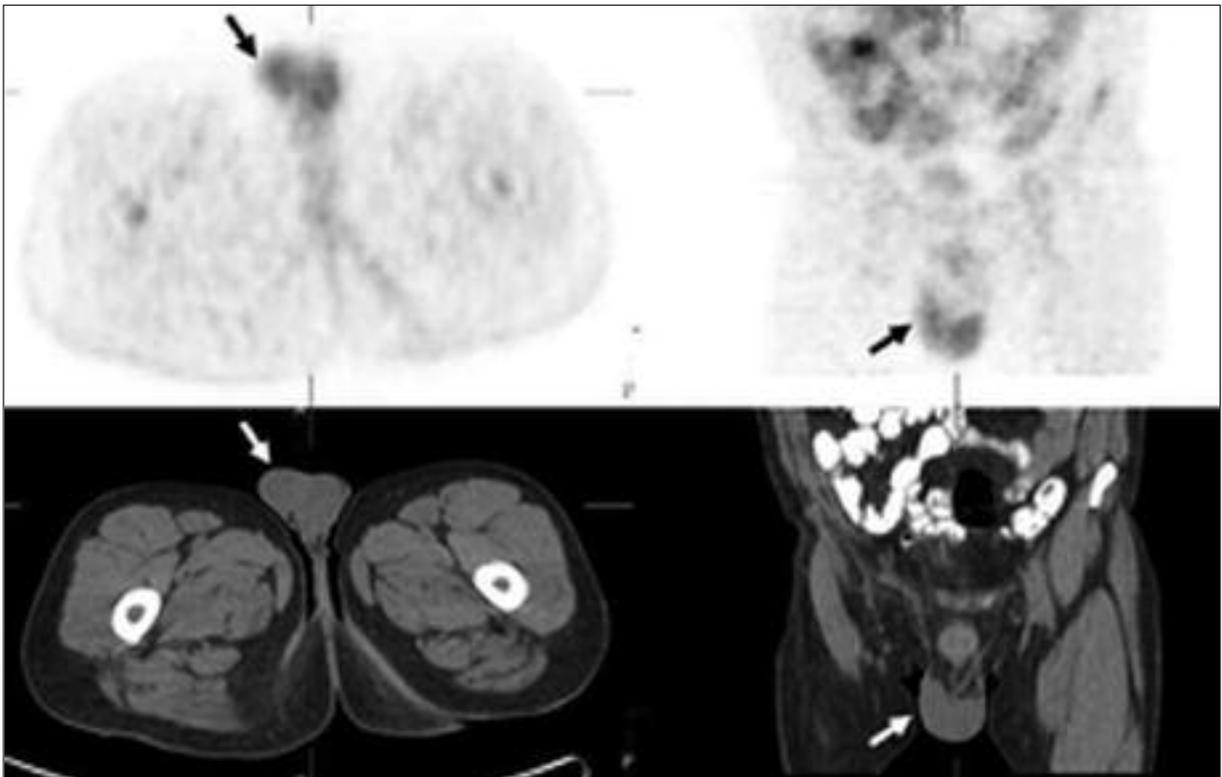


FIGURE 2B: Both testes are in normal localisation at scrotum in the first PET/CT examination.

that mildly increased activity in the right inguinal region could be due to the retractile testis. A consultant urologist confirmed that right testis could be moved down to the scrotum, and thus a retractile testis was considered.

FDG rapidly accumulates in many benign lesions (active inflammation and benign tumors such as chronic thyroiditis, chronic sinusitis, colonic adenoma).^{1,2} Additionally, some organs normally may have increased FDG accumulation, including the brain, heart, kidney, and urinary tract.²

Retractile testis is a condition frequently observed by pediatricians and this state rarely is experienced in adults, consisting the “ascent” of one or both testes toward the superficial inguinal pouch after an active cremasteric reflex.³ The testis with

spermatogenesis is one of the organs that has high metabolic activity. Kasuda et al.⁴ confirmed that the normal testis with spermatogenesis shows intense FDG uptake, and they warn against interpreting this as an abnormal finding. To our knowledge, in the literature there is only one case with retractile testis showed high FDG accumulation published by Hirofumi et al.¹

If increased FDG activity is noted in the inguinal region consistent with testicular tissue in the corresponding CT slices, retractile testis could be included in the differential diagnosis. As previous reports have indicated, a retractile testis is a benign process that does not require interventional therapy such as surgery,⁵ and an expert urologist can make a diagnosis of retractile testis by palpation.

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