Interesting Image

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Inguinal Hernia Sac Implantation on ^{18}F-FDG PET/CT in Uterine Serous Carcinoma

Uterin Seröz Karsinomda ^{18}F-FDG PET/BT'de İnginal Herni Kesesi İmplantasyonu

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Abstract

A 62-year-old woman underwent whole-body ^{18}F-fluorodeoxyglucose-positron emission tomography/computed tomography (^{18}F-FDG PET/CT) for staging. Imaging demonstrated an intensely ^{18}F-FDG avid uterine mass measuring 130×120×100 mm, periuterine and interaortocaval metastatic lymph nodes, and an abdominal extra-pelvic peritoneal implant establishing FIGO 2023 stage IVB disease. In addition, a 33×27 mm ^{18}F-FDG-avid lesion was identified within the left inguinal hernia sac, compatible with an unusual localization of peritoneal dissemination. This case illustrates the value of ^{18}F-FDG PET/CT in demonstrating atypical metastatic sites and mapping the extent of disease through whole-body imaging.

Keywords: ^{18}F-FDG PET/CT, endometrial serous carcinoma, inguinal hernia sac, peritoneal implantation, extra-pelvic metastasis, staging

Öz

Altmış iki yaşındaki kadın hastaya evreleme amacıyla tüm vücut ^{18}F-florodeoksiglukoz pozitron emisyon tomografisi/bilgisayarlı tomografi (^{18}F-FDG PET/BT) incelemesi uygulanmıştır. Görüntülemede, 130×120×100 mm boyutlarında yoğun ^{18}F-FDG tutulumu gösteren uterin kitle, periüterin ve interaortokaval metastatik lenf nodları ve FIGO 2023 Evre IVB hastalığı ortaya koyan abdominal ekstra-pelvik peritoneal implant saptanmıştır. Ayrıca, sol inguinal herni kesesi içerisinde, peritoneal yayılımın alışılmadık bir lokalizasyonu ile uyumlu, 33×27 mm boyutunda ^{18}F-FDG tutulumu gösteren bir lezyon izlenmiştir. Bu olgu, ^{18}F-FDG PET/BT'nin tüm vücut görüntüleme yoluyla atipik metastatik yerleşimlerin gösterilmesindeki ve hastalık yaygınlığının haritalanmasındaki değerini ortaya koymaktadır.

Anahtar Kelimeler: ^{18}F-FDG PET/BT, endometrial seröz karsinom, inguinal herni kesesi, peritoneal implantasyon, ekstra-pelvik metastaz, evreleme

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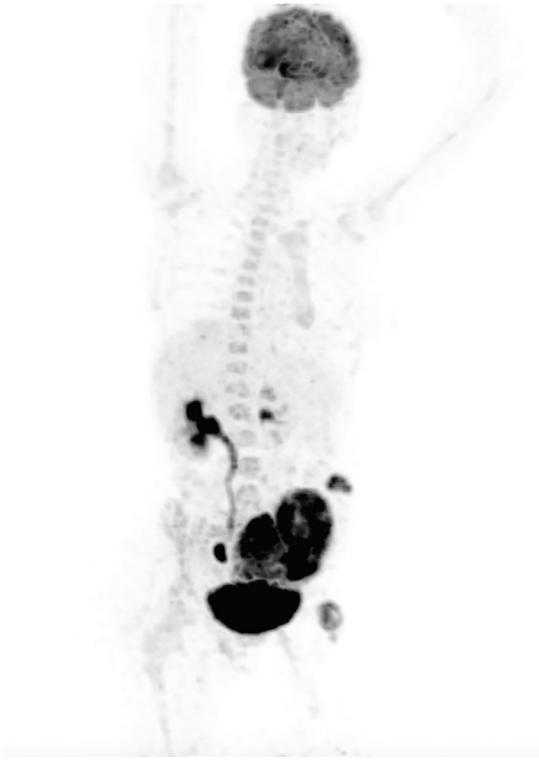


Figure 1a. A 62-year-old postmenopausal woman presented with abnormal uterine bleeding, pelvic pain, and progressive abdominal distension. Endometrial curettage revealed endometrial serous carcinoma (ESC). ESC is an aggressive form of endometrial cancer, often associated with early extrauterine spread, peritoneal carcinomatosis, and poor survival, even when uterine disease is limited (1).
Previous contrast-enhanced computed tomography (CT) or magnetic resonance imaging for this case is unavailable. Whole-body ^{18}F-fluorodeoxyglucose-positron emission tomography/CT was performed for staging. Maximum-intensity projection imaging demonstrated a large, intensely hypermetabolic pelvic mass corresponding to an enlarged uterus containing a heterogeneous, predominantly solid tumor.

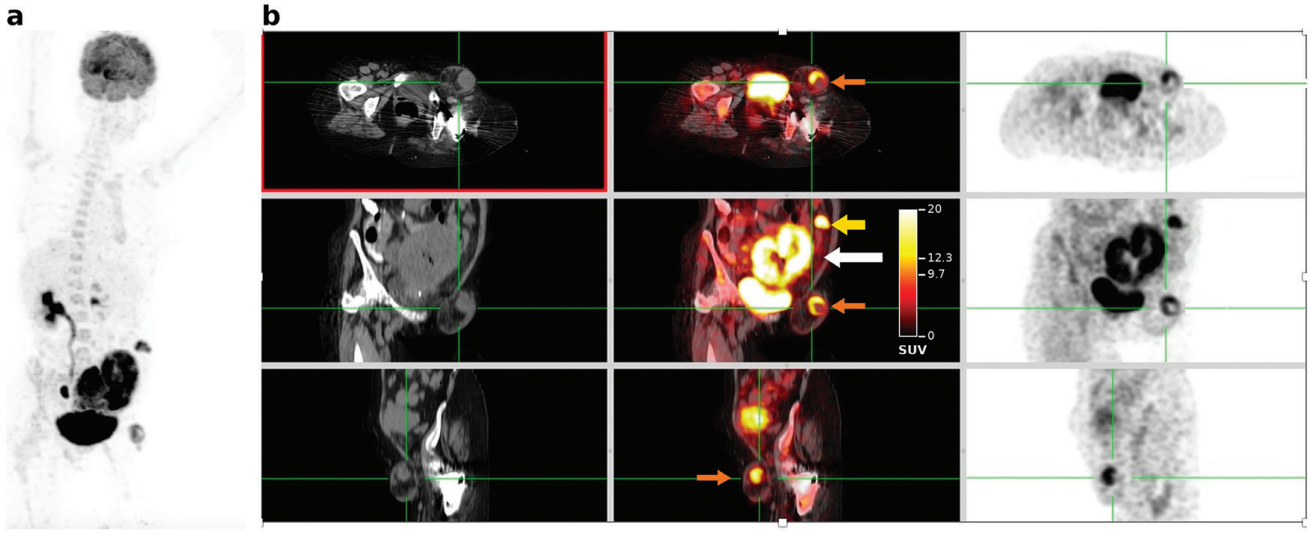


Figure 1b. Axial, sagittal, and coronal sections revealed ^{18}F-fluorodeoxyglucose (^{18}F-FDG)-avid periuterine and interaortocaval lymph nodes, consistent with nodal metastases. Additionally, an ^{18}F-FDG-avid peritoneal implant was identified superior to the pelvic brim [above the level of the iliac crest; yellow arrow; maximum standard uptake values (SUV_{max}): 12.3], consistent with abdominal extra-pelvic peritoneal dissemination. The uterine mass (130 × 120 × 100 mm in size, SUV_{max}: 20, white arrow) caused secondary right-sided hydroureteronephrosis due to ureteral compression. Diffuse bone marrow uptake without discrete focal lesions favored reactive hematopoietic activation rather than skeletal metastasis.

Careful evaluation of the lower pelvic wall demonstrated a well-defined hypodense lesion within a left inguinal hernia sac, exhibiting a peripheral ^{18}F-FDG-avid rim and central low attenuation, compatible with metastatic peritoneal implantation (orange arrow, SUV_{max}: 9.7). Evaluation of the inguinal hernia sac with computed tomography alone was limited by pronounced metal artifacts related to the left total hip prosthesis. Nevertheless, a hypodense lesion measuring 33 × 27 mm could be identified within the left inguinal hernia sac.

Metastatic involvement of the inguinal hernia sac is rare and most commonly originates from gastrointestinal or ovarian primaries; detection by functional imaging in endometrial carcinoma is exceedingly uncommon (2,3). The abdominal extra-pelvic peritoneal implants established FIGO 2023 stage IVB disease, while the ^{18}F-FDG-avid lesion within the left inguinal hernia sac represented an unusual imaging manifestation of peritoneal dissemination (4).

This case underscores the aggressive nature of endometrial serous carcinoma and highlights the superior utility of whole-body functional imaging in identifying atypical metastatic sites to guide clinical decision-making.

Ethics

Informed Consent: Written informed consent was obtained from the patient.

Footnotes

Authorship Contributions

Surgical and Medical Practices: F.B.A., G.S., Concept: G.S., Design: G.S., Data Collection or Processing: F.B.A., G.S., Analysis or Interpretation: F.B.A., G.S., Literature Search: F.B.A., G.S., Writing: F.B.A., G.S.

Conflict of Interest: No conflicts of interest were declared by the authors.

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