



Primary Isolated Breast Lymphoma Presenting as Primary Breast Cancer with ¹⁸F-FDG PET/CT

¹⁸F-FDG PET/BT'de Meme Kanserini Taklit Eden Primer Meme Lenfoması

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Abstract

A 40-year-old woman with a palpable mass lesion in her right breast suggested as breast cancer was admitted to ¹⁸F-fluorodeoxyglucose (FDG) positron emission tomography/computed tomography (PET/CT) unit for the metabolic characterization of the lesion and for the staging of the disease. The patient had no fever and no evidence of weight loss or night sweats. ¹⁸F-FDG PET/CT revealed an isolated solid mass lesion with increased ¹⁸F-FDG uptake in the upper outer quadrant of the right breast and increased ¹⁸F-FDG uptake in the lymph nodes of the right axilla suspected as primary breast cancer and its local lymph node metastasis. There was no other pathological ¹⁸F-FDG uptake in the whole body. Excisional biopsy histopathology revealed diffuse large B-cell non-Hodgkin lymphoma.

Keywords: Breast, non-Hodgkin lymphoma, PET/CT, ¹⁸F-FDG

Öz

Sağ memede kitle saptanan meme kanseri ön tanılı 40 yaşında kadın hasta, lezyonun metabolik karakterizasyonu ve hastalığın evrenmesi amacıyla ¹⁸F-florodeoksiglukoz (FDG) pozitron emisyon tomografisi/bilgisayarlı tomografi (PET/BT) ünitesine başvurdu. Hastanın ateş, kilo kaybı veya gece terlemesi yoktu. ¹⁸F-FDG PET/BT görüntülemesinde sağ meme üst dış kadranda artmış ¹⁸F-FDG tutulumu gösteren solid bir kitle lezyonu ile; sağ aksillada artmış ¹⁸F-FDG tutulumu gösteren lenf nodları izlenmiş olup ön planda primer meme kanseri ve aksiller lenf nodlarında metastaz şüphesi uyandırmıştır. Tüm vücudun geri kalan kısımlarında herhangi bir patolojik ¹⁸F-FDG tutulumu yoktu. Lezyonun eksizyonel biyopsi histopatolojisinde diffüz büyük B-hücreli non-Hodgkin lenfoma saptandı.

Anahtar kelimeler: Meme, non-Hodgkin lenfoma, PET/BT, ¹⁸F-FDG

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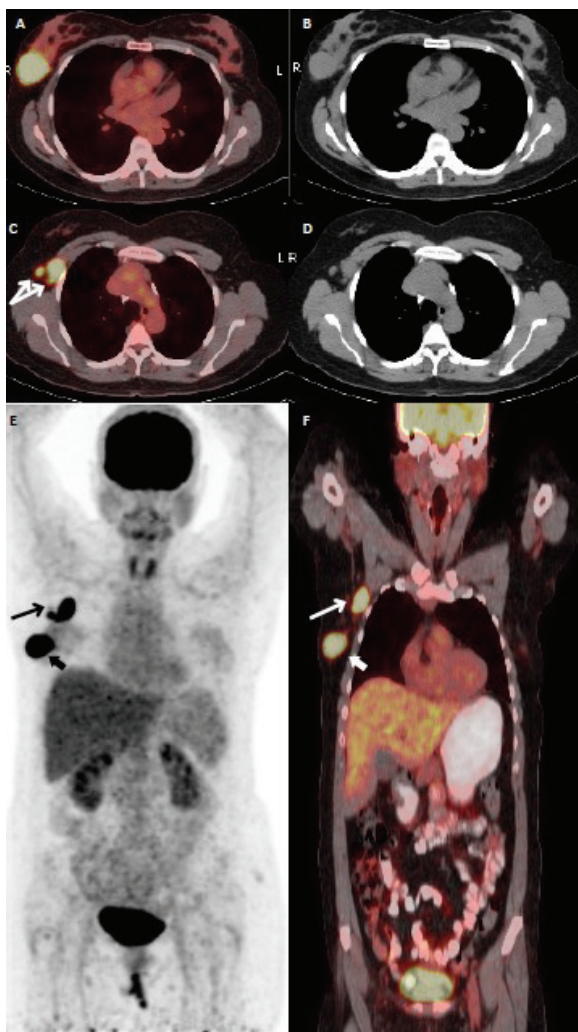


Figure 1. A 40-year-old woman with a palpable mass with an axial diameter of about 4 cm in her right breast suggested as primary breast cancer was admitted to our department for ^{18}F -fluorodeoxyglucose (FDG) positron emission tomography/computed tomography (PET/CT) imaging for metabolic characterization of the lesion. The patient had no fever and no evidence of weight loss or night sweats. The axial PET/CT and CT images of the chest (A, B, C, D) show a hypermetabolic lesion in the upper outer quadrant of the right breast with increased ^{18}F -FDG uptake (maximum standard uptake value: 19.3) and lymph node (arrows) involvement with increased ^{18}F -FDG uptake in the right axilla. Whole body maximum intensity projection (MIP) (E) and coronal PET/CT images (F) revealed hypermetabolic breast lesion (thick arrow) and axillary nodes (arrow) without other abnormal ^{18}F -FDG uptake in the entire body. Breast masses are common but are not usually caused by hematological malignancies. The breast is an uncommon site for developing malignant lymphomas. The small amount of lymphoid tissue in the breast may be the cause of the rarity of primary breast lymphoma (PBL) (1,2). Less than 1% of NHL involve the breast primarily and PBL accounts for 0.04%-0.5% of all breast malignancies (3,4) The most common histology of patients reported to have PBL is diffuse large B-cell non-Hodgkin lymphoma (DLBCL) (5). ^{18}F -FDG PET/CT has an important role in the staging of lymphoma, in the evaluation of treatment response and in the detection of recurrence (6). Excisional biopsy result of the right breast lesion was reported as a DLBCL activated B-cell subtype. Immunohistochemical findings were CD3(+), CD5(+), CD10(-), CD20(+), CD38(+), CD44 (+),PAX5(+), Bcl-2(+), Bcl-6(+), and Ki-67 labeling index (80%-90%). The patient was then referred to the medical oncology department and received combination chemotherapy.

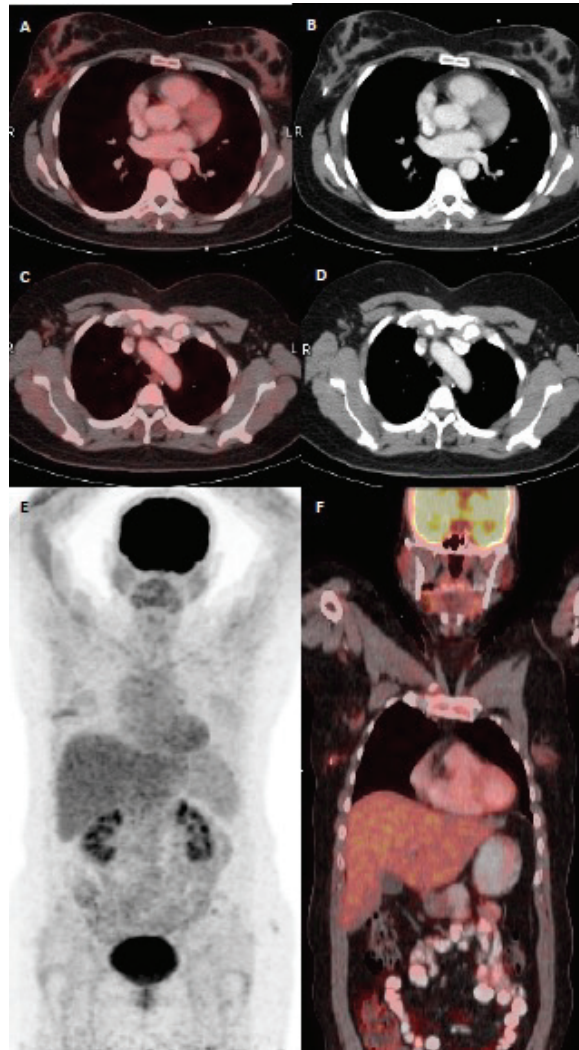


Figure 2. ¹⁸F-FDG PET/CT was performed following appropriate chemotherapy, without any ¹⁸F-FDG uptake in the whole body 4 months after the initial PET/CT study. The axial PET/CT and CT images (A, B, C, D) of the control PET/CT scan show no pathological ¹⁸F-FDG uptake in the right breast and axilla. Whole-body MIP (E) and coronal PET/CT (F) images revealed complete regression of the disease.

Ethic

Informed Consent: Written informed consent was obtained.

Peer-review: Externally peer-reviewed.

Authorship Contributions

Surgical and Medical Practices: Ö.V.T., Ö.O., B.Y., Concept: Ö.V.T., B.Y., Design: Ö.V.T., B.Y., Data Collection or Processing: Ö.V.T., Ö.O., B.Y., Analysis or Interpretation: Ö.V.T., Ö.O., B.Y., Literature Search: Ö.V.T., Ö.O., Writing: Ö.V.T., Ö.O., B.Y.

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