Interesting Image

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Omental Cake in Non-Hodgkin's Disease: ^{18}F-FDG PET-CT Findings

Non-Hodgkin Lenfomada Omental Kek: ^{18}F-FDG PET-BT Bulguları

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Abstract

Neoplastic infiltration of the omentum is mostly caused by metastatic ovarian, gastric, colon, or pancreatic cancer. Lymphomatous infiltration of the omentum is rare because the omentum lacks a lymphoid component. To date, lymphomatous involvement of the omentum has only been reported in patients with non-Hodgkin lymphoma. Peritoneal lymphomatosis remains a rare presentation of malignant lymphoma characterized by diffuse peritoneal lesions and is frequently accompanied by ascites and mesenteric lesions. In this review, we aimed to illustrate the case of a 72 year old mal patient diagnosed with aggressive large B-cell lymphoma, adressed for initial extension assessment in whom ^{18}F-fluorodeoxyglucose positron emission tomograph/computed tomography found unusual omental and mesenteric involvement.

Keywords: ^{18}F-FDG PET-CT, non-Hodgkin's lymphoma, omental cake

Öz

Omentumun neoplastik infiltrasyonu çoğunlukla metastatik over, gastrik, kolon veya pankreas kanserinden kaynaklanır. Omentumun lenfomatöz infiltrasyonu nadirdir çünkü omentumda lenfoid bir bileşen yoktur. Bugüne kadar, omentumun lenfomatöz tutulumu yalnızca non-Hodgkin lenfomalı hastalarda bildirilmiştir. Peritoneal lenfomatozis, yaygın peritoneal lezyonlarla karakterize ve sıklıkla asit ve mezenterik lezyonlarla birlikte görülen malign lenfomanın nadir bir sunumu olmaya devam etmektedir. Bu derlemede, agresif büyük B-hücreli lenfoma tanısı almış, ilk ekstansiyon değerlendirmesi için başvuran ve ^{18}F-florodeoksiglukoz pozitron emisyon tomografisi/bilgisayarlı tomografide alışılmadık omental ve mezenterik tutulum bulunan 72 yaşında bir erkek hastayı bildirmeyi amaçladık.

Anahtar kelimeler: ^{18}F-FDG PET-BT, non-Hodgkin lenfoma, omental kek

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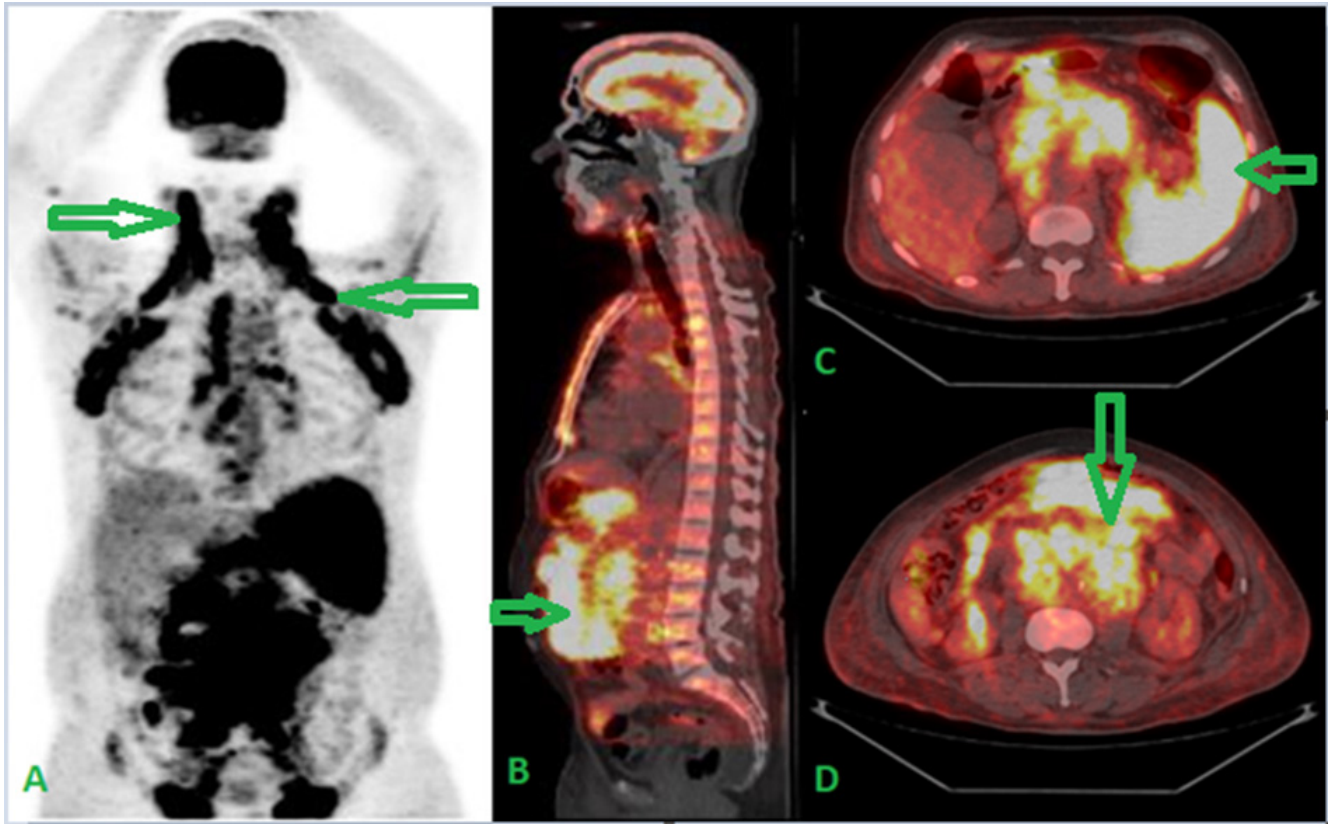

Figure 1. A 72 year old mal patient diagnosed with aggressive large B-cell lymphoma, adressed for initial extension assessment. A whole body ^{18}F-fluorodeoxyglucose (^{18}F-FDG)-positron emission tomograph (PET) scan showed the presence of lymph node involvement of almost all the lymph nodes above and below the diaphragm (A; maximum intensity projection; arrows), diffuse splenic damage [C; fused axial section PET- computed tomography (CT); arrow] and intense ^{18}F-FDG uptake in the pelvis with epiploic and mesenteric nodular foci (B; fused coronal image PET-CT; arrow) and (D; fused axial section PET-CT arrow) eliciting SUV_{max} up to 14.9, suggesting diffuse peritoneal lymphomatosis. This case illustrates an extraordinary presentation of peritoneal lymphomatosis visualized on PET-CT and an uncommon aspect of "^{18}F-FDG-avid omentum cake" in non-Hodgkin's lymphoma. The greater omentum is a fibrous, fatty membrane structure formed by the continuation of the peritoneal surface of the anterior and posterior viscera. It extends downward from the stomach and folds in on itself, covering the small intestine and attaching to the upper side of the transverse colon (1). Neoplastic infiltration of the omentum is most commonly caused by metastatic ovarian, gastric, colon, or pancreatic cancer. Lymphomatous infiltration of the omentum is rare because the omentum lacks a lymphoid component. To date, lymphomatous involvement of the omentum has only been reported in patients with non-Hodgkin lymphoma (1). Since most lymphomas are usually metabolically active, PET using ^{18}F-FDG is very useful for early diagnosis and staging (2). PET-CT may be useful in the assessment of lymphomatous peritoneal tumor infiltration, as outlined in several published studies of other malignancies (3). Peritoneal lymphoma is radiologically characterized by diffuse peritoneal thickening and mass, and is associated with ascites in most cases. Intestinal wall thickening, retroperitoneal lymphadenopathy, and hepatosplenomegaly are also frequently observed (4). Peritoneal involvement is critical for accurate staging and treatment planning, as peritoneal involvement can be cured with appropriate therapeutic intervention and may result in death if treatment is delayed (5), which in our case highlights the value and the performances of PET-CT in initial staging and evaluation of the extent of the disease.

Ethics

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

Footnote

Authorship Contributions

Concept: M.O., S.O.N., O.A.S., Y.B., A.D., Design: M.O., S.O.N., O.A.S., Y.B., A.D., Data Collection or Processing: M.O., Analysis or Interpretation: M.O., S.O.N., A.D., Literature Search: M.O., O.A.S., Writing: M.O.

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References

1. Jacobs JE, Salhany KE, Fox KR, Birnbaum BA. Omental caking in Hodgkin's disease. Computed tomography findings. Clin Imaging. 1996;20:253-255.
2. Hutchings M, Barrington SF. PET/CT for therapy response assessment in lymphoma. J Nucl Med. 2009;50:21S-30S.
3. Turlakow A, Yeung HW, Salmon AS, Macapinlac HA, Larson SM. Peritoneal carcinomatosis: role of (18)F-FDG PET. J Nucl Med. 2003;44:1407-1412.
4. Karaosmanoglu D, Karcaaltincaba M, Oguz B, Akata D, Ozmen M, Akhan O. CT findings of lymphoma with peritoneal, omental and mesenteric involvement: peritoneal lymphomatosis. Eur J Radiol. 2009 2009;71:313-317.
5. Ichikawa S, Fukuhara N, Saito K, Onodera K, Onishi Y, Yokoyama H, Ichinohasama R, Harigae H. Diffuse Large B-cell Lymphoma Presenting as Peritoneal Lymphomatosis: A Case Report and Literature Review. Intern Med. 2022;61:2057-2060.