



The PET Experts

Staging of Nasal Type Natural Killer/T-Cell Lymphoma: A Comparison with Conventional Staging Methods

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Abstract

The utility of ^{18}F -FDG PET/CT in patients with nasal-type natural killer (NK)/T-cell lymphoma has not been established. Therefore, we evaluated the role of ^{18}F -FDG PET/CT for determining cancer staging by comparing its results to those of conventional staging methods (CSMs) (physical examination, CT with intravenous contrast, biopsies from primary sites, and bone marrow examinations) in patients with nasal-type NK/T-cell lymphoma.

Methods: In this study, 52 consecutive patients (34 men, 18 women; mean age, 49.4 y) with newly diagnosed nasal-type NK/T-cell lymphoma were studied. Anatomic regions ($n = 1,300$; 16 nodal and 9 extranodal regions per patient) were assessed with an ^{18}F -FDG PET/CT scan and with CSMs, and each anatomic region was classified as positive or negative for malignancy. Biopsy and clinical follow-up, including additional imaging studies, were used as the gold standard for diagnosis.

Results: Of the 59 nodal and 71 extranodal anatomic regions that were truly positive for malignancy, ^{18}F -FDG PET/CT detected 58 nodal and 69 extranodal. CSMs, however, detected only 44 of the nodal and 61 of the extranodal anatomic regions that were positive for malignancy (nodal comparison of PET/CT vs. CSMs, $P < 0.001$; extranodal comparison of PET/CT vs. CSMs, $P = 0.008$). **PET/CT scans exhibited a significantly better sensitivity (97.7% vs. 80.7%, $P < 0.001$) than CSMs for the detection of malignant lesions. PET/CT findings altered the original staging category for 12 patients (21.2%) and affected treatment planning in 23 cases (44.2%).**

Conclusion: Our study demonstrated that ^{18}F -FDG PET/CT scanning is a valuable modality for staging and treatment planning in patients with nasal-type NK/T-cell lymphoma.