

F-18 FDG PET/CT Imaging in Recurrent Mantle Cell Lymphoma Presenting With Cauda Equina Syndrome

Ahmet Bilici, MD,* Bala Basak Oven Ustaalioglu, MD,* Mesut Seker, MD,* Nesrin Canpolat, MD,†
and Mahmut Gumus, MD*

Abstract: We report a case of recurrent mantle cell lymphoma (MCL) with cauda equina involvement imaged with F-18 fluorodeoxyglucose positron emission tomography/computed tomography (FDG PET/CT). A 75-years-old man presented with bilateral lower extremity muscle weakness who had received treatment for MCL. The involvement of L₃–S₁ nerve roots with disease were diagnosed based on the findings on electromyography. An FDG PET/CT scan was performed to rule out lymphoma recurrence. PET revealed intense focal uptake in the cauda equina in the midline and at the level of the right neuroforamen on the L₂–L₅ vertebrae, which showed lymphoma involvement. He was treated with radiotherapy and his neurologic symptoms improved. We conclude that it is useful to use FDG PET/CT in the work-up of possible cauda equina involvement of recurrent MCL.

Received for publication June 25, 2009; revision accepted September 14, 2009. From the *Department of Medical Oncology, Dr. Lütfi Kırdar Kartal Education and Research Hospital, Istanbul, Turkey; and †Department of Nuclear Medicine, Kosuyolu Education and Research Hospital, Istanbul, Turkey.

Reprints: Ahmet Bilici, MD, Menderes Mah, 364.sok, Caglar Apt No 16, Daire 1, 34210, Esenler, Istanbul, Turkey. E-mail: ahmetkknower@yahoo.com.

Copyright © 2010 by Lippincott Williams & Wilkins
ISSN: 0363-9762/10/3503-0211

Key Words: mantle cell lymphoma, cauda equina, recurrence, F-18 fluorodeoxyglucose, positron emission tomography

(*Clin Nucl Med* 2010;35: 211–212)

REFERENCES

1. De Wolf-Peeters C, Pittaluga S. Mantle-cell lymphoma. *Ann Oncol*. 1994; 5(suppl 1):35–37.
2. Duggan MJ, Weisenburger DD, Ye YL, et al. Mantle zone lymphoma. A clinicopathologic study of 22 cases. *Cancer*. 1990;66:522–529.
3. Velders GA, Kluin-Nelemans JC, De Boer CJ, et al. Mantle-cell lymphoma: a population-based clinical study. *J Clin Oncol*. 1996;14:1269–1274.
4. Bedotto J, Spier CM, Paquin ML, et al. Mantle zone lymphoma with central nervous system involvement. *Cancer*. 1986;58:2125–2129.
5. Montserrat E, Bosch F, López-Guillermo A, et al. CNS involvement in mantle-cell lymphoma. *J Clin Oncol*. 1996;14:941–944.
6. Perry JR, Deodhare SS, Bilbao JM, et al. The significance of spinal cord compression as the initial manifestation of lymphoma. *Neurosurgery*. 1993; 32:157–162.
7. Barnard M, Perez-Ordoñez B, Rowed DW, et al. Primary spinal epidural mantle cell lymphoma: case report. *Neurosurgery*. 2000;47:1239–1241.
8. Metser U, Lerman H, Blank A, et al. Malignant involvement of the spine: assessment by ¹⁸F-FDG PET/CT. *J Nucl Med*. 2004;45:279–284.



FIGURE 1. Mantle cell lymphoma (MCL) is a distinctive type of non-Hodgkin lymphoma with unique clinical, pathologic, and biologic features.^{1–3} Central nervous system involvement has only rarely been described; it seems to occur in advanced disease or during generalized relapses.^{4–7} A 75-years-old man presented with bilateral lower extremity muscle weakness for 1 week. Bowel and bladder disturbances were not detected. The clinical neurologic examination revealed lower extremity motor weakness, loss of sensation, and reduced lower extremity reflexes, which were predominant on the left. He initially underwent electromyography which demonstrated involvement of the L₃–S₁ roots. Thereafter, FDG PET/CT was performed to detect involvement of the cauda equina for recurrent MCL. FDG PET/CT scan shows diffuse hypermetabolic involvement (standard uptake value: 9.5) at the site of the cauda equina at the midline and at the level of the right neuroforamen between an L₂ and L₅, which was compatible with lymphoma involvement. The sensitivity of FDG PET/CT has been found to be 98% for the detection of spinal metastases.⁸ FDG PET/CT is useful in recurrent MCL with involvement of the cauda equina.