Rare case of extradural spinal metastasis from primary lung malignant melanoma detected with fluorine-18 fluorodeoxyglucose-positron emission tomography/computed tomography

Sir,

Primary malignant melanoma (MM) of the lung is a very rare neoplasm, accounting for 0.01% of all lung tumors.[1,2] Prompt evaluation and close follow-up of the patient is proposed in order to diagnose metastatic dissemination and to improve outcome.[3] There are no previous reports of fluorine-18 fluorodeoxyglucose-positron emission tomography/computed tomography (F-18 FDG PET/CT) in patients with extradural metastasis from primary lung melanoma. Here, we report a rare case of extradural spinal metastasis from primary lung MM during restaging seen in FDG PET/CT. A 56-year-old male patient diagnosed as primary melanoma of lung underwent pneumonectomy and radiotherapy a year before. He presented with the neck pain and was referred for the whole body PET/CT to rule out metastasis. Restaging PET/CT revealed intense uptake in the extradural lesion in C4-C6 vertebral level and no other sites of metastasis [Figure 1]. Lesion was excised which was confirmed pathologically as metastasis from melanoma [Figure 2].

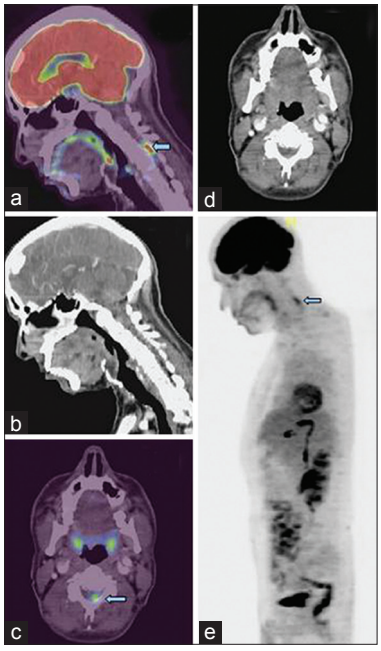

Figure 1: Sagittal fused positron emission tomography/computed tomography (PET/CT) (a) and CT (b); axial fused PET/CT (c) and CT (d); and maximum intensity projection image (e) of whole body fluorodeoxyglucose-PET/CT showing intense uptake (arrows) in the extradural mass C4–C6 vertebra level. There were no other lesions to suggest malignancy in the whole-body PET image

Gokaslan *et al.*,[4] reported 133 cases of vertebral metastatic melanoma over a period of 11 years and Ishii *et al.*,[5] reviewed reports of nine cases of intramedullary spinal cord metastatic melanoma. In the present case, the metastatic melanoma was located in the extradural space of the spinal canal and the metastasis was detected 1 year after the lung melanoma resection. PET/CT imaging has been shown to be superior to conventional imaging methods in patients with high-risk melanoma. Gadolinium-enhanced magnetic resonance imaging (MRI) is highly sensitive in the detection of intra- and extramedullary spinal neoplasms, but the MRI field of view is limited. An advantage of PET or PET/CT is that it offers a whole body technique that allows the detection of distant metastases anywhere in the body including the neural axis.[6-8] There is only one previous report by Lee *et al.*,[9] involving F-18 PET/CT and primary malignant melanoma in a spinal cord root and MRI of the patient revealed an enhanced mass in the intra- and extradural space compressing the spinal cord at the left neural foramen at the C6-C7 level. There have been no reports involving F-18 FDG PET/CT and extradural metastasis from primary lung melanoma. The present

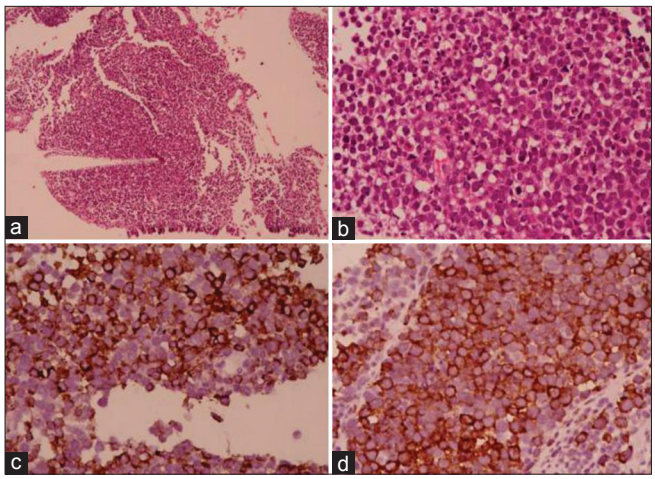

Figure 2: Histopathological microphotographs (hematoxylin and eosin staining) revealed a highly cellular malignant tumor with prominent nucleoli (image a, ×100; image b, ×400). Immunohistochemical study shows that the tumor cells stained diffusely positive for HMB-45 (image c) and Melan-A (image d), consistent with the diagnosis of melanoma

case, to the best of our knowledge, is the first description of a case of extradural spinal metastases from melanoma of the lung which was picked up on the basis of a restaging PET/CT scan.

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