Austin Journal of Nuclear Medicine and Radiotherapy

Austin Publishing Group

Open Access Full Text Article

Case Report

Incidental Finding of Marked Bilateral Cerebellar Hypometabolism in an Asymptomatic Patient Imaged with FDG-PET/CT

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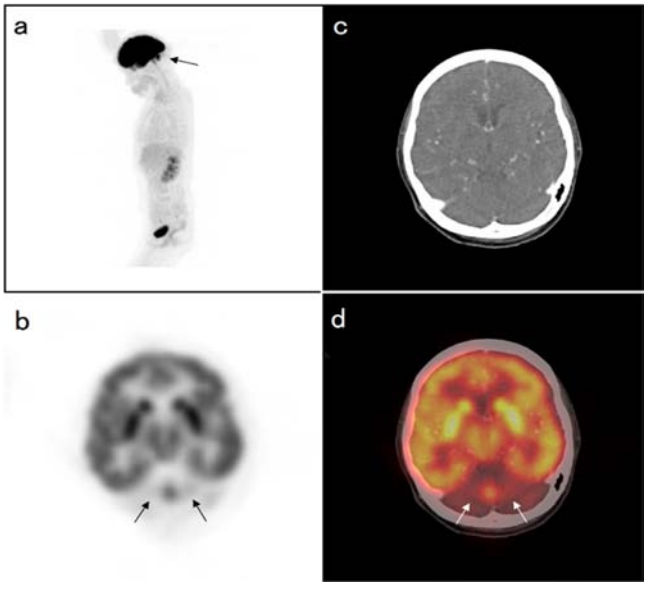
Received: July 02, 2014; **Accepted:** July 28, 2014; **Published:** July 30, 2014

Figure 1 an asymptomatic 51-year-old woman underwent an FDG-PET/CT examination for diffuse large B cell lymphoma. 3D MIP image (a), axial FDG image (b) and FDG-PET/CT hybrid image (d) show diffusely decreased FDG uptake in the bilateral cerebellar hemispheres (shown by arrows). This is an abnormal pattern as cerebellum normally shows high FDG uptake on FDG PET scans, such that it could be utilized as an internal reference for brain activity [1]. FDG uptake pattern is normal in the cerebral hemispheres. Possible causes of cerebellar hypometabolism include prior infarction, trauma and hemorrhage. There was no evidence of these entities on corresponding transmission CT (c). Moreover, decreased uptake associated with these abnormalities would be focal. Other diagnostic possibilities include crossed cerebellar diaschisis [2], which would be unilateral; Parkinson's disease [3]; chronic alcoholism [4-5] and antiepileptic medication [6], none of these conditions applied for the patient. Another entity where decreased cerebellar uptake of FDG has been described is olivopontocerebellar atrophy (OPCA) [7], also not applicable to the patient. Diffuse idiopathic cerebellar calcification has also been reported as a possible cause [8], where diffuse coarse calcification was shown throughout the cerebellar hemispheres on CT. Transmission CT of our patient did not show any evidence of calcification(c). An MRI was recommended for further evaluation, which was declined for financial reasons. The patient remained asymptomatic after the FDG-PET/CT examination.



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Citation: Liu T and Mari Aparici C. Incidental Finding of Marked Bilateral Cerebellar Hypometabolism in an Asymptomatic Patient Imaged with FDG-PET/CT. Austin J Nucl Med Radiother. 2014;1(1): 1.