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NEUROLOGICAL PICTURE

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FDG-PET in meningeal lymphomatosis

Figure 1 T2 weighted image shows homogenous thickening of the cauda equina extending from L1 to L5, with increased signal intensity.

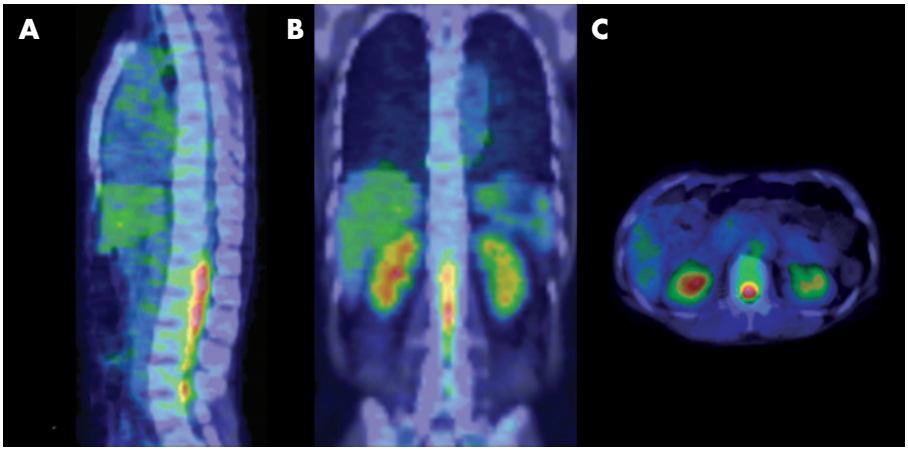

Figure 2 (A) Sagittal, (B) coronal and (C) axial fused fluorodeoxyglucose (FDG)-positron emission tomography-CT images show increased FDG uptake in the spinal canal, corresponding to the magnetic resonance image.

A 45-year-old woman with biopsy proven mantle cell lymphoma in partial remission complained of headache, progressive dysphagia, dysarthria and weakness in the right leg. Neurological examination revealed left recurrent nerve palsy and weakness (4+/5) in the right extensor hallucis longus muscle.

Lumbar MRI showed irregular thickening of the cauda equina extending from L1 to L5 (fig 1). Fused fluorodeoxyglucose (FDG)-positron emission tomography (PET)-CT imaging showed increased FDG uptake (fig 2) in the spinal canal, corresponding to the lesions in the cauda equina shown on lumbar MRI. CSF demonstrated an increased number of white blood cells (23/μl) with normal protein and glucose levels, and cytology was positive for malignant lymphoma cells. Meningeal lymphomatosis and spinal cord metastases were diagnosed.

Intrathecal administration of methotrexate ameliorated her neurological symptoms, and CSF tests demonstrated a decreased number of white blood cells (<1/μl). In leptomeningeal carcinomatosis, the cauda equina are often involved because tumour cells tend to settle by gravity.[1] It is not well acknowledged that leptomeningeal carcinomatosis may be detected by FDG-PET scan, and only a limited number of case reports are available.[2] A case of peripheral nerve involvement in neurolymphomatosis detected by FDG-PET has been reported.[3] FDG-PET may be a valuable new imaging method which allows prompt diagnosis for leptomeningeal carcinomatosis.

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