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¹⁸F-FDG PET/CT Findings of Leptomeningeal Metastasis in Nasopharyngeal Carcinoma

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Abstract: Nasopharyngeal carcinoma (NC) is an epithelial tumor with distinctive prevalence in East and Southeast Asia. Most patients with NC only experience regional metastasis. In cases of distant metastasis, prognosis is grim. Leptomeningeal spread of the disease is a rare occurrence, which is sparsely described in the literature. We present a case of a 33-year-old man with a history of high-grade NC with leptomeningeal metastasis. Initial MRI lumbar spine demonstrated subtle findings consistent with leptomeningeal disease. These findings are easily discernible on ¹⁸F-FDG PET/CT.

Key Words: nasopharyngeal carcinoma, leptomeningeal metastasis, FDG PET/CT

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FIGURE 1. Sagittal T1 (A) and postcontrast T1 fat-saturated (B) MR of the lumbar spine demonstrate an enhancing lesion in the spinal canal at the level of the sacrum (arrow). MIP image of PET/CT (C) and sagittal fused PET/CT (D) demonstrate diffuse FDG-avid spinal leptomeningeal metastasis with SUV_{max} of 32. The findings are easily discernible on PET/CT.¹⁻⁸ Also noted are FDG-avid left cervical and supraclavicular nodal metastasis on MIP image. Traditionally, CSF cytology and MRI have been used in the diagnosis of leptomeningeal metastasis.⁹⁻¹¹ PET/CT has shown utility in this case by accentuating the extent of disease.