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Central neurocytoma with unusually intense FDG uptake: Case report

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Central neurocytoma is a benign neuronal tumor with a favorable prognosis. This tumor is typically characterized by decreased uptake of ^{18}F-fluorodeoxy glucose (FDG) and any increased uptake of FDG in patients suffering from this tumor would be highly unusual. A case of central neurocytoma with an intense FDG uptake, combined with atypical histopathological features and a high proliferation index is reported in this paper. A 45-year-old male had a two months' history of right hemiweakness. Magnetic resonance (MR) imaging showed a large tumor in the right lateral ventricle. Positron emission tomography (PET) with FDG revealed high glucose metabolism in the tumor. The histological diagnosis was central neurocytoma with atypical features characterized by microvascular proliferation. The MIB-1 labeling index, ordinarily smaller than 2.0%, was 7.0%. Conventional radiotherapy, with a total dose of 50 Gy, was administered after the surgical treatment. The patient returned to his normal daily activities after the cessation of radiation therapy.

Key words: central neurocytoma, 2-[fluorine-18]fluoro-2-deoxy-D-glucose, positron emission tomography, MIB-1 labeling index