

FDG-PET findings of the brain in lymphomatoid granulomatosis

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A 44-year-old man with a history of sudden onset short-term disorientation was admitted to our hospital. T2-weighted fast spin-echo MR images of the head showed increased signal intensity in the bilateral frontal and parietal white matter. Gadolinium-enhanced T1-weighted spin-echo images showed multiple areas with punctate and linear enhancement scattered in the bilateral frontal and parietal white matter. Although ^{18}F -fluorodeoxyglucose positron emission tomography (^{18}F FDG-PET) did not display a significant increase in FDG accumulation in the bilateral frontal and parietal white matter, kinetic analysis of this scan showed increased hexokinase activity in the lesions compared to the unaffected occipital white matter. Diagnosis was made by open biopsy of the right frontal lobe and pathologic specimen was positive for lymphomatoid granulomatosis (LYG). The patient received high-dose methotrexate with CHOP (cyclophosphamide, doxorubicin hydrochloride, vincristine sulfate, and prednisolone) chemotherapy and follow-up MRI showed improvement of the lesions. ^{18}F FDG-PET study with kinetic analysis may be useful to diagnose LYG in the central nervous system.

Key words: FDG (fluorodeoxyglucose), lymphomatoid granulomatosis, PET (positron emission tomography)