

Hyperglycemia-induced unilateral basal ganglion lesions with and without hemichorea—A PET study

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摘要

Abstract

Hyperglycemia-induced unilateral basal ganglion lesions occur mostly in Asian patients. A signal abnormality in the basal ganglion region is evident on these patients neuroimaging. Despite characteristic imaging findings and clinical manifestations, the underlying mechanism is still unclear. To clarify the underlying pathophysiology of unilateral basal ganglion lesions, we examined the [18F]-fluorodeoxyglucose (FDG) positron emission tomography (PET) findings in 3 patients with hyperglycemia. The PET studies were performed at 3 weeks, 5 weeks, and 7 months after clinical onset. The markedly reduced rates of cerebral glucose metabolism in the corresponding lesions on T1-weighted magnetic resonance images provided direct evidence of regional metabolic failure. We suggest that the metabolic derangements associated with hyperglycemia and vascular insufficiency contribute to regional metabolic failure in patients with poorly controlled diabetes mellitus