糖尿病患者於基底核疑似出血性變化的電腦斷層表現

High attenuation of basal ganglia lesion mimicking ICH in CT in patient with diabetes

陳家慶，林家葳，劉建佑，陳維恭

中國醫藥大學附設醫院 急診部

Introduction: We presented a case finally diagnosed as diabetic hemichorea-hemiballism (HCHB) with normal blood glucose level and initially brain computed tomography(CT) showed mimic basal ganglion hemorrhage.

Case Report: This 60-year-old male with diabetes mellitus, type 2 under medicine control in recent 2 days. He presented to our emergency department due to abnormal involuntary movements in his left upper limb for 2 days. He also complained of bilateral hands numbness and left side was predominant. There was no limb weakness, no facial palsy, no slurred speech, no unsteady gait and no obvious other focal sign. Blood tests showed unremarkable finding, including normal blood sugar level. Bain CT showed faint hyperattenuation of the entire right basal gangion which is easily confused with intracranial hemorrhage(figure1). Brain MRI after admission showed right basal ganglion T1-hyperintensity with neuronal loss, suggestive of chorea associated with non-ketotic hyperglycemia(figure2). His symptom got improvement gradually, and he was discharged on day 11.

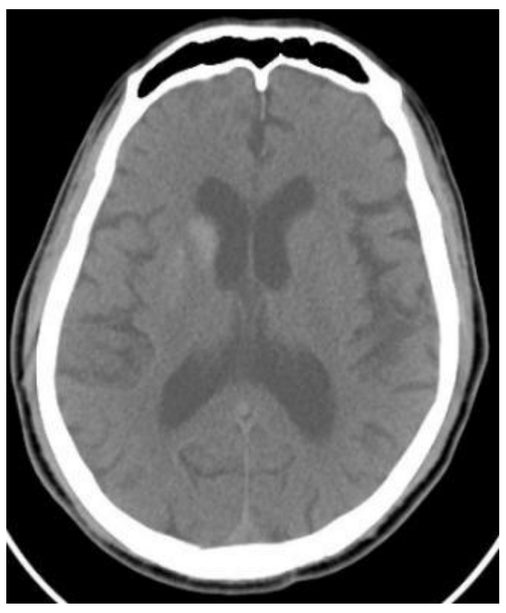

Figure1 Bain CT showed faint hyperattenuation of the entire right basal gangion which is easily confused with intracranial hemorrhage

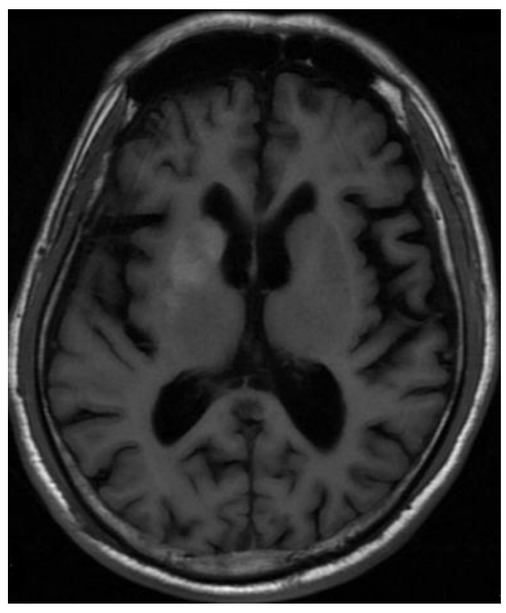

Figure2 Brain MRI after admission showed right basal ganglion T1-hyperintensity with neuronal loss, suggestive of chorea associated with non-ketotic hyperglycemia

Discussion: Hemichorea-hemiballism (HCHB) is usually continuous, but may be intermittent, and it may occur with other types of involuntary movements, such as dystonia, myoclonus, or orofacial gestures1. The causes of HCHB include hemorrhagic or ischemic stroke, neoplasm, systemic lupus erythematosus, hyperglycemic hyperosmolar state (HHS), Wilson's disease, and thyrotoxicosis2. It has been reported in different states of diabetes mellitus such as nonketotic hyperglycemia3,4. It also has been reported in new onset diabetes mellitus5 and even patient has a normal blood glucose level6. Although the pathogenesis of diabetes related chorea is not fully understood, some theories suggested thalamic disinhibition from depletion of inhibitory neurotransmitters, diabetic vasculopathy with consequent vascular insufficiency of the striatum, acute basal ganglia dysfunction secondary to hyperglycemia, hyperosmolarity, hyperviscosity, petechial hemorrhage or inflammatory processes7-10. Hyperdense putamen and/or caudate nucleus is typical CT finding. The most commonly described MRI finding is high signal intensity in basal ganglia on T1-weighted11. The mainstay of treatment is aggressive glycemic control with a good prognosis, although several case reports have documented hemichorea can occur a few weeks after the blood glucose levels have been controlled.

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