中文題目：非酮性高血糖引發的單側舞蹈症:罕見但可逆的高血糖併發症

英文題目：Non-ketotic hyperglycemic hemichorea: A rare but reversible complication of uncontrolled diabetes mellitus

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Introduction

Hemichorea is a hyperkinetic movement disorder, characterized by continuous, irregular, unpredictable, brief jerky involuntary movements on one side of the body. It is associated with malfunction of contralateral basal ganglia. Acute stroke, traumatic brain injury and neoplasms are major etiologies of unilateral hemichorea. Hyperglycemia accounts for 1% of acquired chorea and is named as non-ketotic hyperglycemic hemichorea(NKHH). This disorder is a rare but reversible complication of uncontrolled diabetes mellitus. We described a patient with NKHH and reviewed literature.

Case presentation

A 69 year-old Taiwaness man with type 2 DM and hypertension presented to the ED (emergency department) with complaints of involuntary movement of left side body, gait disturbance and facial twitching for one month. The involuntary movement was continuous, choreoathetotic and purposeless. The movement did not change in amplitude or frequency with rest or with attempting purposeful movements. It prevented him from walking. He did not have similar prior experience, relevant past history or family history of movement disorder. There was no consciousness change, headache, head trauma, facial droop, dysphagia, slurred speech, vision disturbance, incontinence or limbs weakness. He had been diagnosed with type 2 diabetes mellitus three years ago, but was not on any treatment. He complained about easy thirsty, polyphagia, polydepsia and body weight loss for two months. Neurological examination showed left upper and lower limbs chorea and facial dyskinesia. The rest of the nervous system examination was unremarkable. The blood tests revealed hyperglycemia (750 mg/dl), high hemoglobin A1C level (13.2%), slightly increased serum osmolality (303 mOsm/kg), normal HCO3 level(24 mmol/L) and normal ketone concentration (0.3 mmol/L). Serum levels of vitamin B12, blood cell acanthocytosis and electrolyte were normal. On head computed tomography (CT), right basal ganglia was faintly hyperintense. Brain magnetic resonance imaging (MRI) revealed high signal in right basal ganglia on T1-weighed image. Diffusion Weighted Imaging (DWI) showed no diffusion abnormality in the cerebral parenchyma and the basal ganglia. No abnormalities were observed in the electroencephalogram (EEG) and carotid artery ultrasound. NKHH was the final

diagnosis based on the medical history, laboratory results and imaging finding. The clinical symptoms completely resolved following the correction of hyperglycemia by intensive insulin therapy.

Discussion

We reported a case with classical clinical symptoms, blood test and image finding of NKHH. In review of literature, NKHH is characterized by involuntary, hyperkinetic and irregular movements and usually affects elderly Asian woman with poor glycemic control. The typical imaging finding are hyperdense lesion in contralateral basal ganglia from T1-weighted MRI image. The most important treatment and prevention is to maintain euglycemic status. It has excellent prognosis with early diagnosis and treatment. We highlighted NKHH is a rare but reversible complication of uncontrolled diabetes mellitus.