

Images in...

Prolonged hemiballism after the remission of non-ketotic hyperosmolar syndrome

Yi-Chun Lin,¹ Yen-Chung Lin²¹Department of Internal Medicine, Taipei City Hospital Ren-Ai branch, Taipei, Taiwan;²Department of Internal Medicine, School of Medicine, College of Medicine, Taipei Medical University Hospital, Taipei, Taiwan

Correspondence to Dr Yen-Chung Lin, yclin0229@tmu.edu.tw

DESCRIPTION

A 78-year-old Taiwanese woman presented with polyuria. She denied history of type 2 diabetes mellitus, or cerebral vascular disease. In examinations, the skin turgors were dry. The laboratory data revealed that serum glucose level was 45.34 mmol per litre, sodium level was 133 mmol per litre, haemoglobin A1c was 13.5% and serum osmolality was 308 mmol per litre. The serum ketone body was negative. However, after 1 week, a sudden onset of involuntary dyskinesia over left side of limbs (video 1) occurred. The serum sodium level was 136 mmol per litre, and serum glucose levels was 10.3 mmol per litre. She had no other abnormality which could explain the movement disorder. The CT of brain showed bilateral high signals in striatum, (figure 1) and the MR of brain with gadolinium enhanced T1-weighted images displayed bilateral

local high-signals of globus pallidus (figure 2 with red arrow). The symptoms continued but ameliorated after oral risperidol for 2 weeks. Hemiballism is a reversible but rare disorder primarily affecting older Asian diabetic patients during hyperglycaemic crises.¹ Although traditional hemiballism related to hyperglycaemic states correlates with a contralateral hypertensity T1-weighted MR image over striatum, bilateral involvement might subacutely develop beyond the episode of hyperglycaemia.² Rapid correction of diabetic ketoacidosis may also cause the delayed hemiballism and central pontine myelinolysis.³ Recently, a reversible ischaemic insult over striatum potentiated by hyperglycaemia could be detected by spectroscopy. Early detection of ischaemic insults of striatum are keys to prevent long-term damage after episodes of hyperglycaemia.

Video 1 Involuntary dyskinesia focusing on left upper limb in a 78-year-old woman.

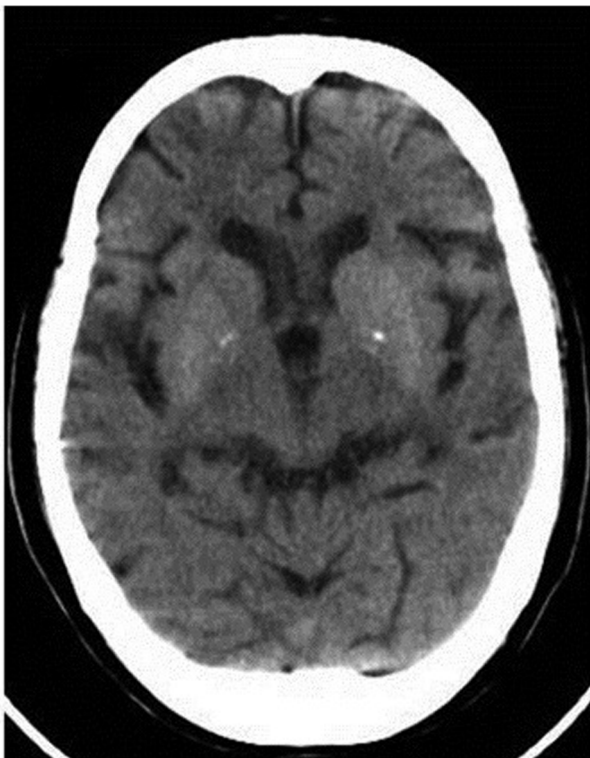


Figure 1 The CT of brain showed bilateral high signals in striatum

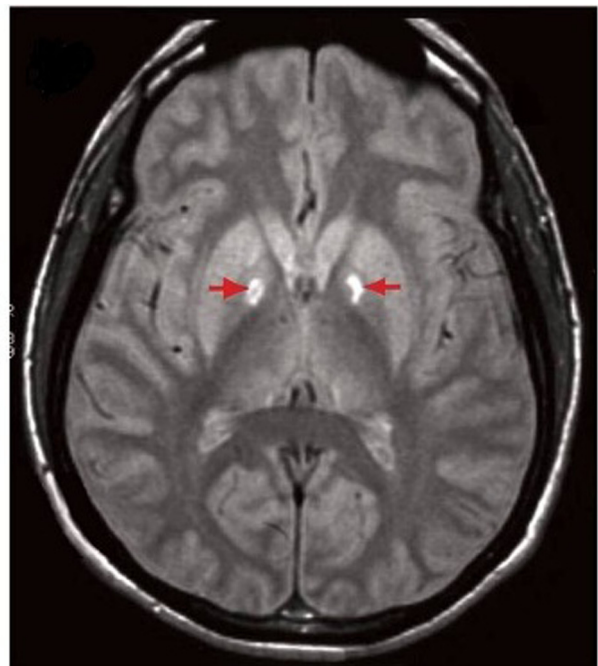


Figure 2 The gadolinium enhanced T1-weighted images of brain MR displayed bilateral localised high-signals over globus pallidus (red arrow).

Learning points

- ▶ The rare and bizzard presentations after the recovery of non-ketotic hyperosmolar syndrome lead to us to report this image.
- ▶ This reversible phenomenon could be successful treated by anti-psychotic agents.

Competing interests None.

Patient consent Obtained.

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