

A Case of the 10 days

Case 298

A 4-year-old girl was transported to our hospital by ambulance for convulsion and loss of consciousness. Immediately after initiation of lunch in kinder garden, she dropped sliding down from a chair with face redness and tonic convulsion lasting for around 10 minutes. Laboratory test revealed AST 48 U/l, ALT 28 U/l, ALP 542 U/l and lactic acid 48 mg/dL.

She experienced convulsion previously two years ago. She had been admitted in our hospital several times not just for convulsion but for consciousness disorder, hypo-glucosemia, and hyper-lactic acidemia. She took brain CT and MRI for further investigation (Figs. 1-3).

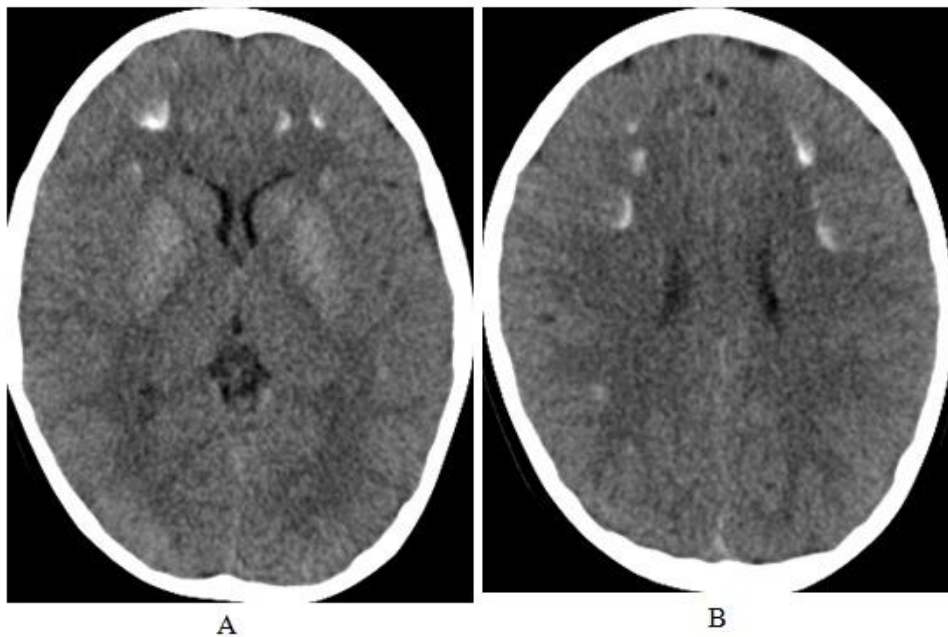
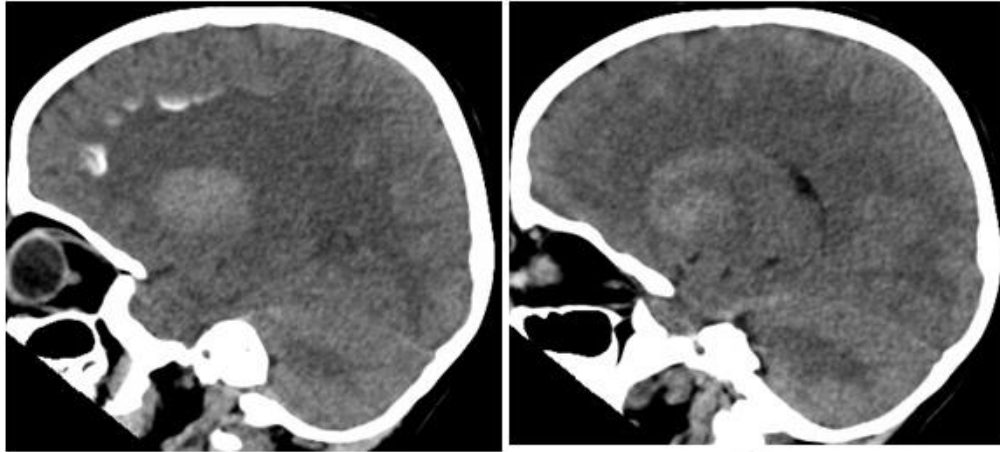


Fig. 1 Axial images of brain CT depict high attenuation areas of cortex adjacent to deep white matter in frontal lobe (A, B) and slight high attenuation of caudate nucleus and basal ganglion (A).



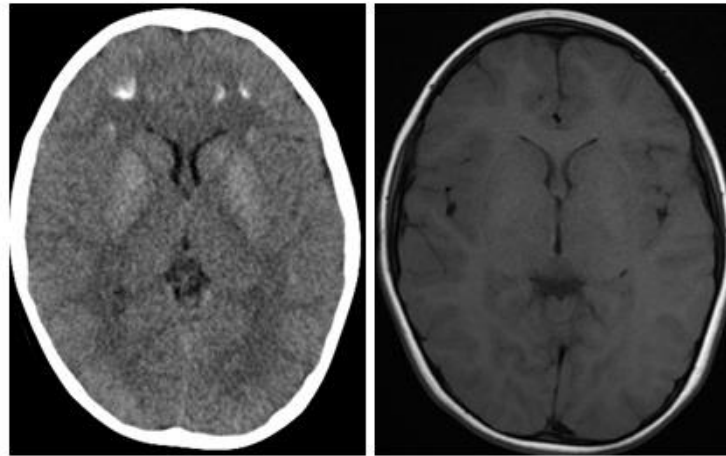
A

B



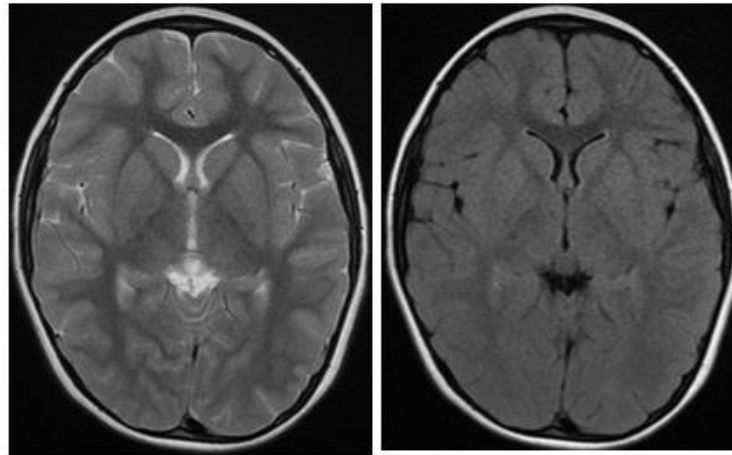
C

Fig. 2 Sagittal (A, B) and coronal (C) CT images depict high attenuation areas of cortex adjacent to deep white matter in frontal lobe (A, C) and slight high attenuation of caudate nucleus and basal ganglion (A-C).



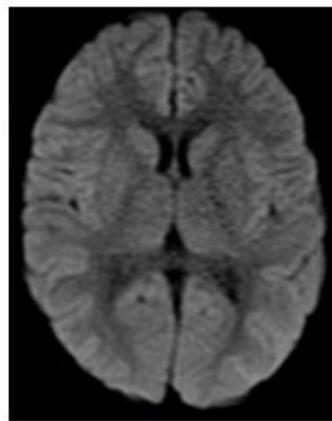
A

B



C

D



E

Fig. 3 High and slight attenuation areas visualized on CT (A) are not demonstrated on T1WIMRI (B), T2WIMRI (C), FLAIRMRI (D), Diffusion WI (E).

What is a possible imaging diagnosis?

1. Hypoglycemic encephalopathy
2. Leigh syndrome
3. Creutzfeldt-Jakob disease
4. MELAS syndrome
5. Wilson disease

answer

2023.5.15