

Reversible uraemic encephalopathy

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DESCRIPTION

Bilateral symmetric white matter changes are usually associated with toxic, metabolic or hereditary leukoencephalopathies.^{1–3} We report an interesting case of uraemic encephalopathy who presented with diffusion restricting symmetric lesions which resolved after renal replacement therapy.

A 19-year-old young obese man presented with fatigue of few days and two episodes of generalised seizures 8 hours apart. There were no other systemic complaints. His medical history was unremarkable. He did not have history of alcohol misuse or illicit drug usage. There was no family medical history of seizures or any neurological problems. There were no focal neurological deficits. His systemic examination was unrevealing. His blood pressure was 180/100 mm Hg. All peripheral pulses were

felt equally with no radio-femoral delay. Imaging was done to look for the aetiology of seizures as well as to look at the pituitary gland as the patient was obese. Simultaneously, blood samples were sent for haematological and biochemical profiles. MRI of the brain (figure 1A, B) revealed bilaterally symmetric diffusion restricting lesions in the centrum semiovale and corona radiata. His creatinine was 22 mg/dL and he was found to be anaemic. He was initiated on renal replacement therapy. He had no further seizures. MRI was repeated which showed complete resolution of the diffusion restriction (figure 1C, D).

Learning points

- ▶ Symmetric diffusion restricting lesions are mostly due to acute metabolic derangements, such as renal dysfunction, liver dysfunction, hyperglycaemia or due to chemotherapeutic or illicit drug usage.
- ▶ Prompt evaluation and treatment can lead to complete reversal of the clinical symptoms as well as imaging findings.

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REFERENCES

- 1 Kumar Y, Drumsta D, Mangla M, *et al*. Toxins in Brain! Magnetic Resonance (MR) imaging of toxic leukoencephalopathy - a pictorial essay. *Pol J Radiol* 2017;82:311–9.
- 2 Sivasubramanian S, Moorthy S, Sreekumar K, *et al*. Diffusion-weighted magnetic resonance imaging in acute reversible toxic leukoencephalopathy: A report of two cases. *Indian J Radiol Imaging* 2010;20:192–4.
- 3 McKinney AM, Kieffer SA, Paylor RT, *et al*. Acute toxic leukoencephalopathy: potential for reversibility clinically and on MRI with diffusion-weighted and FLAIR imaging. *AJR Am J Roentgenol* 2009;193:192–206.

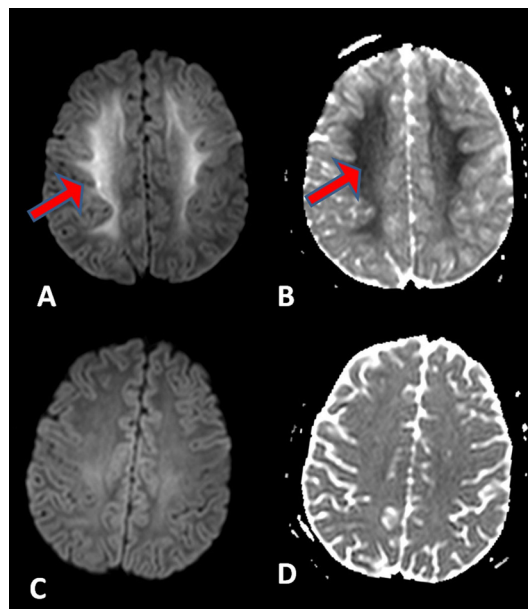


Figure 1 (A) Diffusion-weighted MRI showing restricted diffusion (hyperintensity pointed by red arrow) with (B) showing corresponding hypointensity on apparent diffusion coefficient map. (C) and (D) show the reversal of the changes in (A) and (B), respectively.



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