Teaching NeuroImages: Reversible brain MRI lesions in adult-onset type II citrullinemia

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Figure Brain MRI before and after liver transplantation

Initial brain MRI showed T1-hypointense (A) and T2-hyperintense (B) lesions without enhancement (not shown in the figure) in the cingulate cortex. Two weeks after liver transplantation, the T1-hypointense and T2-hyperintense lesions nearly resolved (C and D).

An 18-year-old man presented with recurrent lethargy without triggers for 6 months. Neurologic examinations showed bilateral pyramidal signs. Brain MRI showed bilateral symmetric lesions in the cingulate cortex (figure, A and B). Adult-onset type II citrullinemia was confirmed by hyperammonemia, citrullinemia, and the mutation of the *SLC25A13* gene.¹ He was treated with low-carbohydrate diets, arginine, and sodium pyruvate but the treatment failed. Finally, the patient underwent liver transplantation, and the symptoms and signs recovered dramatically 2 weeks later. A repeat brain MRI showed the previous lesions nearly resolved (figure, C and D).

Prompt diagnosis of the disease and appropriate treatment are crucial for the favorable prognosis.²

AUTHOR CONTRIBUTIONS

Lizhang Chen: acquisition of data and writing of the manuscript. Bi Zhao: critical revision of the manuscript. Huifang Shang: study supervision.

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DISCLOSURE

The authors report no disclosures relevant to the manuscript. Go to Neurology.org for full disclosures.

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