


Case Image

Herpes simplex virus-induced acute necrotizing encephalopathy in an adult

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A 39-year-old female was referred to our emergency center with a consciousness disorder that got worse by the hour after hospitalization at her local hospital for a urinary tract infection 5 days prior. She had no past medical history. Physical examination revealed the following: Glasgow Coma Scale, E2V2M6; blood pressure, 90/70 mm Hg; heart rate, 110 beats/min; respiratory rate, 30 breaths/min; and body temperature, 38.0°C. White blood cell count, lactate

dehydrogenase levels, and c-reactive protein levels were 26,000/ μ L, 964 U/L, and 4.61 mg/dL, respectively. Only protein levels were elevated to 140 mg/dL in the cerebrospinal fluid. Magnetic resonance imaging revealed abnormal signals in bilateral thalami, which raised the suspicion of acute necrotizing encephalopathy (ANE) (Fig. 1). High-dose intravenous methylprednisolone, immunoglobulins, and 500 mg 3 times/day acyclovir were administered.

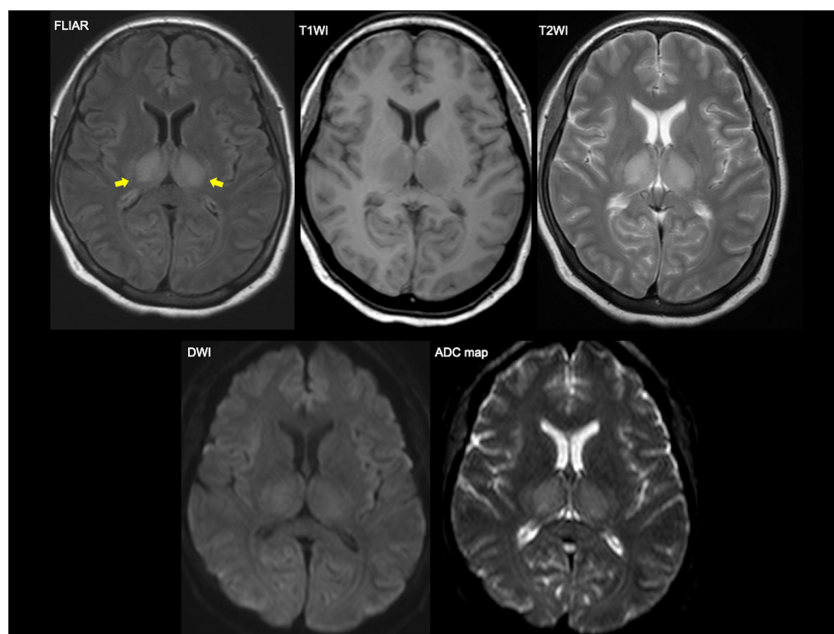


Fig. 1. Magnetic resonance imaging (MRI) shows bilateral symmetrical thalamic involvement. These lesions demonstrate hypointense on T1-weighted image (WI), and hyperintense on T2WI and fluid attenuated inversion recovery sequence. Diffusion-weighted imaging demonstrate diffusion restriction in thalami, and axial apparent diffusion coefficient (ADC) images show trilaminar appearance.

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Herpes simplex virus (HSV)-specific antibodies were detected in the blood later. Despite intensive care, she succumbed to brain death 14 days after admission. ANE, which has a characteristic multifocal, symmetric, bilateral

involvement of the thalami, is the fatal complication of pediatric viral infections.^{1–3} Macrophage activation and hypercytokinemia was considered to be in the pathogenesis of ANE. Influenza virus commonly causes adult ANE, making this the first report of HSV-induced ANE.^{3–5}

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Conflict of Interest: All authors declare that they have no conflict of interest and the manuscript has not been previously published; the manuscript is not under consideration for publication elsewhere.

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