Teaching NeuroImages:

Acute hemorrhagic leukoencephalitis after mumps

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Figure Axial and sagittal MRI sequences

(A) T1-weighted hyperintense signal involving thalami and right parieto-occipital region; (B) T2-weighted and (C) fluid-attenuated inversion recovery images show hyperintensity with central hypointensity in the internal capsule, thalami, cerebellum, and subcortical white matter; (D) hypointensity (blooming) on gradient imaging; (E, F) diffusion-weighted imaging with apparent diffusion coefficient map showing restriction of diffusion in brainstem and cerebellum.

A 30-year-old man presented with altered sensorium following mumps infection without any lateralizing neurologic deficits. Clinical profile, epidemic outbreak in the local community, persistent testicular swelling, and positive serology (immunoglobulin G 3.85 and immunoglobulin M 15.6 antibody index) confirmed the diagnosis of mumps. Brain MRI showed hyperintense hemorrhagic lesions in thalami, brainstem, cerebellum, parieto-occipital, and subcortical regions on both T1- and T2-weighted images (figure, A–D) with areas of restricted diffusion (figure, E and F). He died despite treatment with methylprednisolone. Mumps, although

usually benign and self-limited,¹ can cause neurologic complications. The fulminant course and hemorrhagic white matter lesions may differentiate acute hemorrhagic leukoencephalitis from acute disseminated encephalomyelitis.²

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