Teaching *NeuroImages*: MRI time lag with acute disseminated encephalomyelitis

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Figure 1 Brain MRI, T2/fluid-attenuated inversion recovery sequence, 6 weeks after symptom onset without any significant parenchymal hyperintensities

Axial T2/fluid-attenuated inversion recovery sequence images demonstrate the body of the lateral ventricles, body of the corpus callosum, and corona radiata (A); lateral ventricles, basal ganglia, and insula (B); and pons, cerebellar peduncles, and cerebellum (C).

A 68-year-old man presented with 6 weeks of progressive dementia, visual distortions, and gait disturbance. Brain MRI demonstrated diffuse cerebral atrophy (figure 1). CSF showed lymphocytic pleocytosis and ele-

vated protein; other studies were negative. He became aphasic. Repeat brain MRI 8 weeks from symptom onset demonstrated multifocal central parenchymal non-enhancing T2/fluid-attenuated inversion recovery

Figure 2 Brain MRI, T2/fluid-attenuated inversion recovery sequence, 8 weeks after symptom onset demonstrating interval development of multifocal central parenchymal hyperintensities

Axial T2/fluid-attenuated inversion recovery sequence images demonstrate hyperintensities involving the body of the corpus callosum and adjacent anterior cingulate cortex (A); bilateral insular and right subinsular regions with mild lateral ventriculomegaly (B); and left middle cerebellar peduncle (C). There is no associated enhancement in the signal abnormalities or leptomeninges (not shown).

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hyperintensities (figure 2). Whole-body FDG-PET/CT showed no malignancy. Left frontal stereotactic biopsy revealed multifocal perivascular demyelination consistent with acute disseminated encephalomyelitis (ADEM). The patient received IV methylprednisolone followed by plasma exchange with good recovery.

This case represents an atypical presentation of ADEM as rapidly progressive dementia in an older patient without known infectious or vaccination trigger. Delay in the appearance of MRI lesions has been previously reported,^{1,2} but the 6- to 8-week lag is unusual.

DISCLOSURE

Dr. Lakhan serves on the American Academy of Neurology's Distance Education Subcommittee. **Go to Neurology.org for full disclosures.**

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