

Teaching NeuroImages: 5-FU–induced acute leukoencephalopathy

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Figure 1 Cranial diffusion-weighted MRI showing diffusion restriction in (A) splenium of corpus callosum and (B) deep white matter

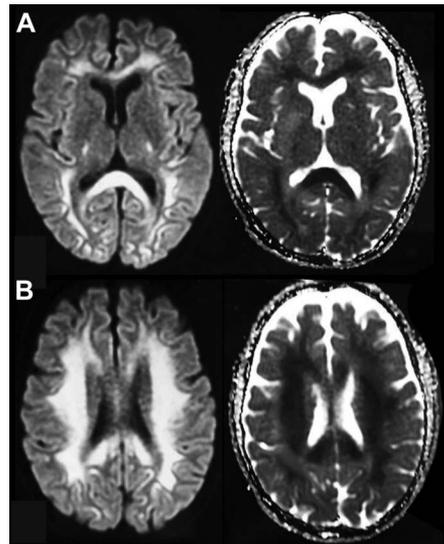
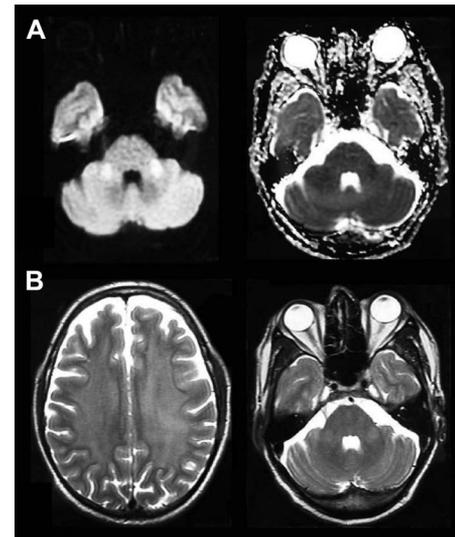


Figure 2 Cranial MRI (A) diffusion restriction involving bilateral middle cerebellar peduncles and (B) T2 hyperintensities in bilateral periventricular and deep white matter and middle cerebellar peduncles



A 55-year-old man with carcinoma sigmoid colon (fluorouracil [5-FU]: cumulative dose of 6,600 mg/m²; and oxaliplatin: 245 mg/m²) presented with encephalopathy and pancerebellar involvement 2 weeks after receiving a third cycle of chemotherapy. Brain MRI showed diffusion restriction in bilateral deep white matter, cerebellar peduncles, and splenium of corpus callosum (figures 1 and 2) suggestive of 5-FU–induced leukoencephalopathy. Symptoms improved after discontinuation of chemotherapy as expected in drug-induced encephalopathy.¹ Diagnosis of PRES (posterior reversible encephalopathy syndrome) seemed less likely because it usually involves posterior subcortical white matter. Diffusion-weighted MRI is a useful modality for early detection of this characteristic encephalopathy.^{1,2}

AUTHOR CONTRIBUTIONS

Sahil Mehta: data collection, writing of manuscript. Gagandeep Singh: revision of manuscript, concept of manuscript. Birinder Singh Paul: data collection, review of literature.

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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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