

Teaching NeuroImage: Atypical Unilateral Cortical Ribboning in Anti-NMDA Receptor Encephalitis

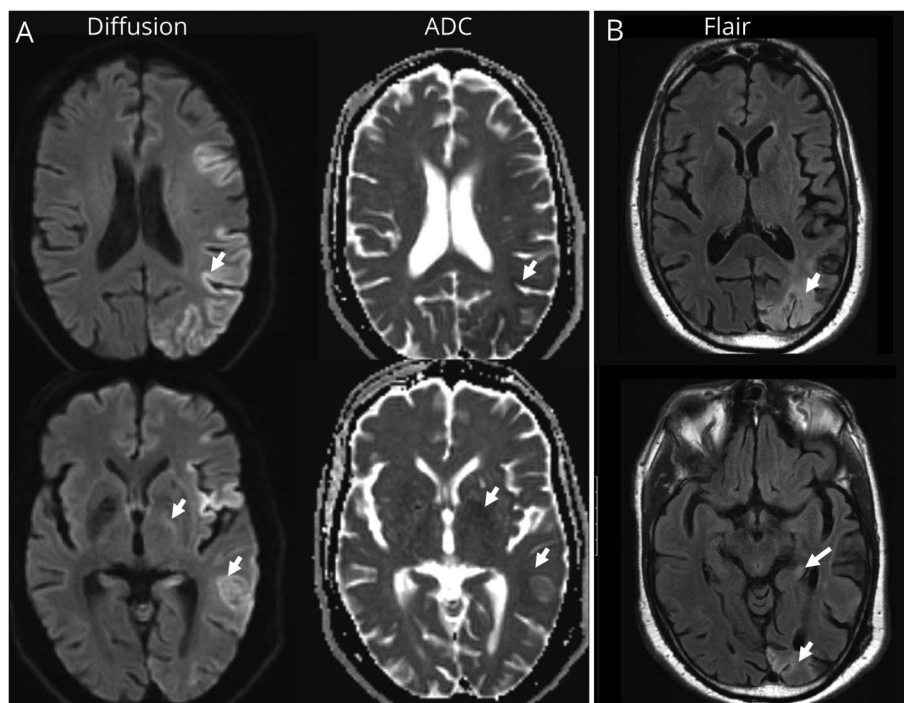
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Figure Brain MRI



Brain MRI on admission showing apparent diffusion coefficient correlated with diffusion restriction signals in left cortical layers, deep basal ganglia (A, arrows), and hyperintensity in left occipital and hippocampus regions (B, arrows).

A 62-year-old man presented with confusion, agitation, and pressured, tangential speech after a car accident. Brain MRI showed left-hemispheric cortical ribboning, concerning for encephalitis, seizure, or prion disease (Figure). Four-day EEG showed left-hemispheric slowing but no epileptiform activity. Toxicology and infectious workups were negative. CSF was positive for anti-NMDA receptor antibodies. Oncologic assessments were unrevealing. Patient received 5 days of intravenous methylprednisolone and IVIG with improved attention, ability to follow commands, and engage in appropriate conversation. Anti-NMDA receptor encephalitis often affects young female patients^{1,2} and often is associated with teratoma. Although often normal, if brain MRI findings are present, lesions are more commonly reported in the medial temporal lobe. This case demonstrates that an acute to subacute change in mental status along with an atypical MRI finding of unilateral cortical

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ribboning is a possible presentation of anti-NMDA receptor encephalitis. Recognition of this atypical presentation is important for early treatment and maximum functional recovery.

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