MRI and encephalography in fatal eastern equine encephalitis

Figure MRI and EEG findings

The 1.5T MRI T2 fluid-attenuated inversion recovery (FLAIR) hyperintense signal in external and internal capsules of both cases (right images) and T1 postgadolinium contrast putaminal enhancement in case 1 only (left image). EEGs with 0.25- to 0.5-Hz periodic complexes (marked with circles [right] and stars [left] in case 1 and circles [right] in case 2) and temporal periodic lateralized epileptiform discharges (marked with stars [left] in case 2).

Eastern equine encephalitis (EEE) is the most severe of the mosquito-borne encephalitides, with a case fatality rate estimated at 36%.¹ We describe 2 fatal cases of seropositive EEE in men. In both patients, EEG monitoring revealed periodic 0.25- to 0.5-Hz transients with lower voltages ($\sim 20\text{--}40\ \mu\text{V}$) than typically seen in herpes encephalitis ($\sim 100\text{--}500\ \mu\text{V}$), and MRI revealed a symmetric pattern of T2 hyperintensity in the lentiform nuclei, as previously noted^{1,2} (figure). Considered together, these MRI and EEG findings suggest a distinctive pattern that may be pathognomonic for EEE in the appropriate clinical context.

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