Periodic lateralized epileptiform discharges

Nathan Watemberg, M.D.
Virginia Commonwealth University, Medical College of Virginia

Lawrence D. Morton, M.D.
Virginia Commonwealth University

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Periodic Lateralized Epileptiform Discharges

Electroencephalography in a 13-year-old boy with fever, altered sensorium, and sudden onset of seizures reveals complex repetitive discharges composed of spiky elements mixed with slower waveforms (Panel A). They are seen diffusely in the left (L) hemisphere (leads 1 to 8), occurring at intervals of approximately 2.5 seconds (arrows). The right (R) hemisphere (leads 11 to 18) shows abnormally slow background activity of 2 Hz per second (delta rhythm) compatible with the presence of acute encephalopathy. For comparison, an electroencephalogram obtained in a normal, awake subject is shown in Panel B. There is normal background activity of 11 to 12 Hz per second (alpha rhythm). This rhythm is predominantly posterior and is evident in leads 4, 8, 14, and 18 (arrows). Note the symmetry in activity between left and right cerebral hemispheres.

The patient was found to have herpes simplex encephalitis, was treated with acyclovir (15 mg per kilogram of body weight per day for 14 days), and made a full neurologic recovery within 6 weeks.