Infectious Temporal Lobe Encephalitis—Not Just Herpes!

Neville Jadeja, MD, MPH¹, Leslie Delfiner, MD¹,
Reza Zarnegar, DO¹, and Mark J. Milstein, MD¹

Keywords

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We describe a rare case of early neurosyphilis presenting with temporal lobe encephalitis (TLE) and briefly review the existing literature for common infectious causes of TLE.

A 49-year-old previously healthy man presented to our institution with acute-onset encephalopathy and nonconvulsive status epilepticus. Electroencephalogram showed frequent Periodic Lateralized Epileptiform Discharges (PLEDs) and status epilepticus originating from the left hemisphere. Magnetic resonance imaging of the brain showed abnormal cortical signal hyperintensity and gyriform enhancement of the left mesial temporal lobe and hippocampus. Cerebrospinal Fluid (CSF) examination revealed elevated protein (160 mg/dL) and a mixed pleocytosis of 35 cells/mm³ (28% neutrophils and 49% lymphocytes). Serum rapid plasma reagin titer was 1:16 and CSF Venereal Disease Research Laboratory (VDRL) was positive. Serological and CSF workup for other infectious (including herpes simplex virus [HSV] and HIV), autoimmune, and paraneoplastic etiologies was negative. A diagnosis of early neurosyphilis was made and the patient was successfully treated with intravenous penicillin.

Figure 1. A, Fluid-attenuated inversion recovery (FLAIR) axial magnetic resonance imaging (MRI) showing hyperintensity of the mesial left temporal lobe. B, Axial postcontrast T1-weighted MRI showing cortical signal hyperintensity and gyriform enhancement of the left mesial temporal lobe.

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Classical descriptions of symptomatic early neurosyphilis include meningeal, otic, ocular, and meningovascular involvement. Recently, reports of early neurosyphilis presenting as TLE have emerged.¹ According to 1 large study of 251 patients with TLE, the most common identifiable infectious causes were HSV 1 and 2, mycobacterium tuberculosis, varicella zoster virus, and mycoplasma pneumoniae.² Only one of these cases had syphilis as an identified etiology. Other less commonly reported infectious etiologies are nocardia, rickettsia, chlamydia, enterovirus, human herpes 6, West Nile virus, La Crosse virus, Japanese encephalitis virus, influenza, adenovirus, metapneumovirus, aspergillosis, coccidioidomycosis, balamuthia mandrillaris, and Creutzfeldt-Jakob disease.²⁻⁴ Clinicians must beware of these infectious mimics of HSV encephalitis.

Authors' Note

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¹ Department of Neurology, Montefiore Medical Center, Bronx, NY, USA

Corresponding Author:

Neville Jadeja, Montefiore Medical Center, 111E, 210 street, Bronx, NY 10467, USA.
Email: drnevillejadeja@gmail.com

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