Teaching NeuroImages:

Facial diplegia due to neuroborreliosis

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Figure 1 MRI brain shows multiple cranial nerve involvement

(A) Axial T1-weighted image postcontrast shows enhancement of the cisternal segments of the oculomotor nerves bilaterally (white arrows). (B) Axial T1-weighted image postcontrast demonstrates enhancement of the interpeduncular portions of the oculomotor nerves bilaterally (white arrows). (C) Axial T1-weighted image postcontrast demonstrates enhancement of the cisternal portion of the right trigeminal nerve (white arrow).

Figure 2 MRI brain shows multiple cranial nerve involvement

(A) Axial T1-weighted image postcontrast demonstrates enhancement of the intracanalicular, labyrinthine, and proximal tympanic segments of the left facial nerve. The first genu is clearly visible (white arrow). (B) Axial T1-weighted image postcontrast demonstrates enhancement of the cisternal and intracanalicular portions of the right facial nerve (white arrow). (C) Axial diffusion-weighted imaging (B1000) demonstrates restricted diffusion within the cisternal segment of the right trigeminal nerve.

A 39-year-old man presented with progressive facial diplegia and mild headache. He reported a self-limited migratory rash 3 weeks previously following a walk in Castlewellan Forest Park in Northern Ireland.

Brain MRI revealed contrast enhancement of cranial nerves III, V, and VII (figures 1 and 2). CSF revealed 356 lymphocytes/ μ L, protein 2.64 g/L,

and normal glucose. Serology was positive for *Borrelia* antibodies. Clinical manifestations of neuroborreliosis may include meningitis, cranial neuropathies, and radiculoneuritis. MRI brain can show enhancement of multiple cranial nerves.¹ This patient was symptomatic only of facial nerve involvement. Treatment is with oral doxycycline or IV ceftriaxone. Our

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patient made a full recovery following the completion of a course of IV ceftriaxone.²

AUTHOR CONTRIBUTIONS

J. Campbell: design/conceptualization of study and revising manuscript.
J. McNamee: conceptualization of study and revising manuscript.
P. Flynn: revising manuscript. G. McDonnell: conceptualization of study and revising manuscript.

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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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