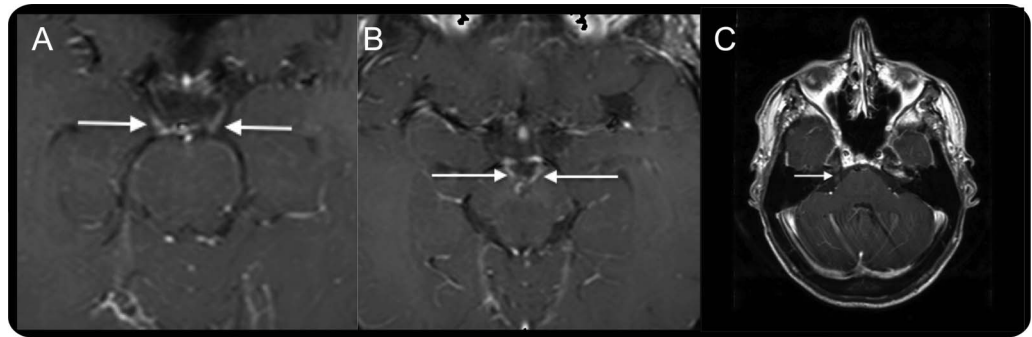


# Teaching NeuroImages: Facial diplegia due to neuroborreliosis

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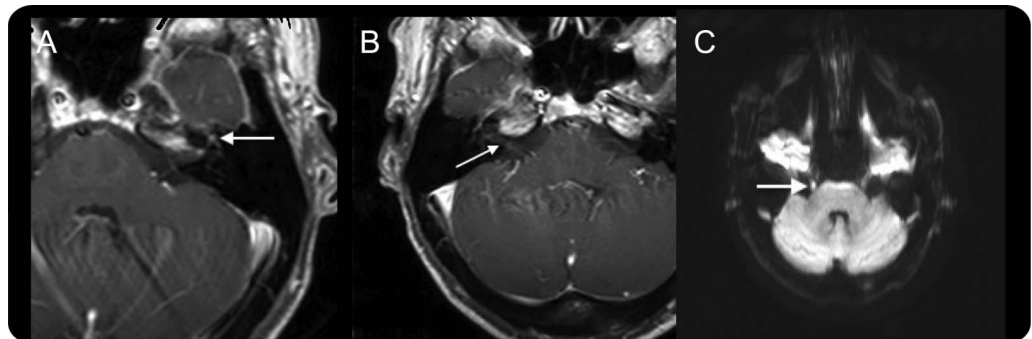
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**Figure 1** MRI brain shows multiple cranial nerve involvement



(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/ $\mu$ 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.<sup>1</sup> This patient was symptomatic only of facial nerve involvement. Treatment is with oral doxycycline or IV cephalosporin. Our

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patient made a full recovery following the completion of a course of IV ceftriaxone.<sup>2</sup>

#### **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](http://Neurology.org) for full disclosures.

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