

# Teaching NeuroImage: Pontine Owl-Eyes Lesions in a Case of Neuroborreliosis

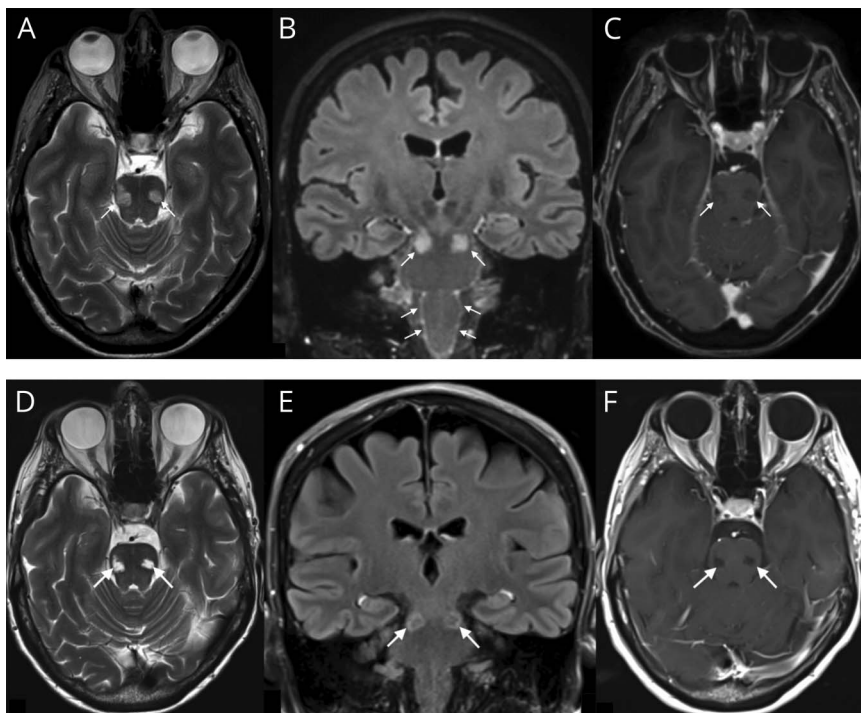
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**Figure** Pontine Owl-Eyes Lesions



MRI before (A–C) and 1 week after (D–F) antibiotic treatment: axial T2 (A and D), coronal FLAIR with gadolinium (B and E), axial T1 with gadolinium (C and F). Initial MRI reveals symmetrical ovoid T2-hyperintense, T1-hypo-intense pontine lesions, with local (C), leptomeningeal (B) and cranial nerves (not shown) contrast enhancement. Posttreatment MRI shows the absence of contrast enhancement in the lesions.

Brain MRI in a 65-year-old woman with headache, sensory ataxia, and tick exposure revealed leptomeningeal and cranial nerve enhancement and T2-hyperintense symmetrical pontine lesions resembling the “owl-eyes” sign, a radiologic finding described in ischemic or compressive myelopathy (Figure, A–C).<sup>1</sup> CSF analysis revealed pleocytosis (163/ $\mu$ L) and intrathecal production of anti-*Borrelia* IgG (CSF/serum index 21,  $N < 2$ ). Workup was negative for alternative causes. The patient fully recovered after 21 days of ceftriaxone (Figure, D–F).

Radiologic findings in neuroborreliosis include signs of cranial neuritis, meningitis, or stroke.<sup>2</sup> In patients presenting with symmetrical T2-hyperintense lesions of the pons, this case supports the inclusion of neuroborreliosis in the differential diagnosis.

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## Appendix Authors

Name	Location	Contribution
<b>Simon Borgeaud, MD</b>	Department of Neurosciences, Division of Neurology, Geneva University Hospital, Geneva and Faculty of Medicine, Switzerland	Acquired the data (examined the patient, made the diagnosis), composed the figure, and wrote the manuscript
<b>Maria Isabel Vargas, MD</b>	Division of Neuroradiology, Geneva University Hospitals and University of Geneva, Geneva, Switzerland	Reviewed radiologic images and designed and composed the figure

## Appendix (continued)

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<b>Patrice H. Lalive, MD</b>	Department of Neurosciences, Division of Neurology, Geneva University Hospital, Geneva and Faculty of Medicine, Switzerland; Diagnostic Department, Division of Laboratory Medicine, Geneva University Hospital, Geneva, Switzerland	Acquired the data (examined the patient, made the diagnosis) and revised the manuscript

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