Teaching NeuroImages: Bilateral optic neuritis

When to suspect anti-MOG antibodies

Ana Felipe-Rucián, MD, Andreas Wegener-Panzer, MD, Isabelle Naßenstein, MD, Markus Reindl, MD, PhD, and Kevin Rostásy, MD

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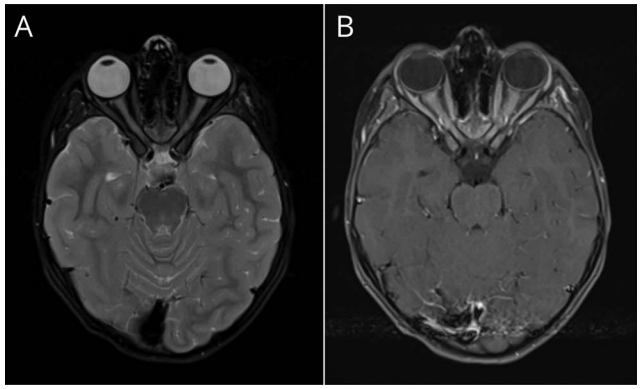
Correspondence
Dr. Rostásy
k.rostasy@
kinderklinik-datteln.de

Figure Brain MRI with contrast



Brain MRI shows bilateral and longitudinally extensive optic neuritis with T2 hyperintensity (A) and perineural enhancement (B).

A 6-year-old girl developed sudden onset painless loss of vision with swelling of both optic discs. Brain MRI demonstrated bilateral extensive optic nerve involvement with perineural enhancement (figure). Her vision recovered completely after treatment with IV methylprednisolone.[1] Serum myelin oligodendrocyte glycoprotein (MOG) antibodies tested positive.

The combination of bilateral loss of vision, longitudinal extensive optic neuritis with sparing of the chiasma, perineural enhancement, and disc edema should alert the physician to the diagnosis of bilateral optic neuritis associated with MOG antibodies. These findings are rare in patients with multiple sclerosis or aquaporin-4-positive neuromyelitis optica, thus helping to differentiate these important differential diagnoses.[2]

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Disclosure

The authors report no disclosures relevant to the manuscript. Go to Neurology.org/N for full disclosures.

From the Neurology Section (A.F.-R.), Pediatric Service, Vall d'Hebron Hospital, Barcelona, Spain; Departments of Radiology (A.W.-P., I.N.) and Pediatric Neurology (K.R.), Children's Hospital Datteln, University Witten/Herdecke, Germany; and Division of Pediatric Neurology (M.R.), Department of Pediatrics I, Medical University of Innsbruck, Austria.

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Appendix Authors

Name	Location	Contribution
Ana Felipe-Rucián, MD	Vall d'Hebron Hospital Barcelona, Spain	Study concept and design, first draft, literature review
Andreas Wegener-Panzer, MD	Children's Hospital Datteln, University Witten/Herdecke, Germany	Neuroimaging discussion and critical review of manuscript for intellectual content
Isabelle Naßenstein, MD	Children's Hospital Datteln, University Witten/Herdecke, Germany	Neuroimaging discussion
Markus Reindl, MD, PhD	Medical University of Innsbruck, Austria	Review of manuscript for intellectual content
Kevin Rostásy	Children's Hospital Datteln, University Witten/Herdecke, Germany	Study concept and design, first draft, literature review and critical review of manuscript for intellectual content

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