Section Editor
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Mystery Case: Baló concentric sclerosis

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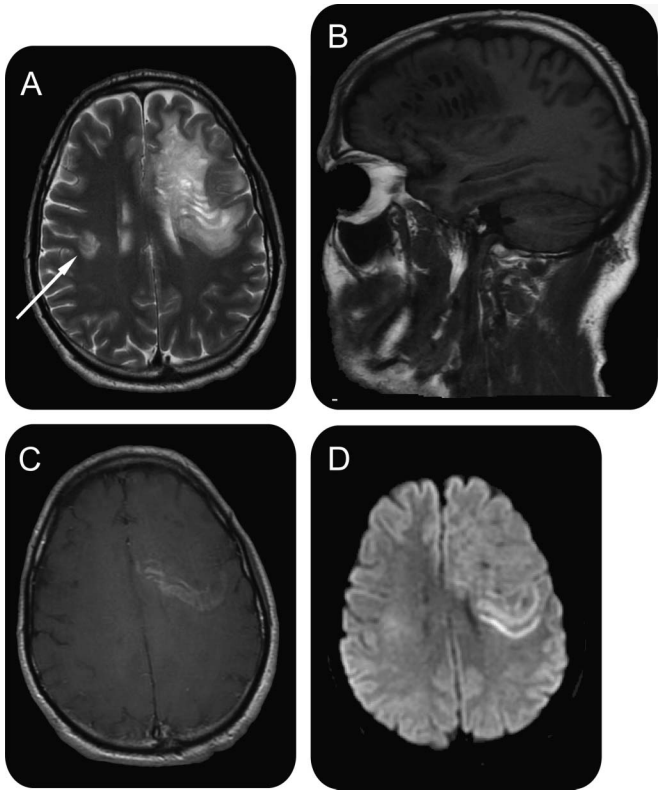
Figure Baló concentric sclerosis



(A) Axial noncontrast T2-weighted image. (B) Sagittal noncontrast T1-weighted image. (C) Axial gadolinium-enhanced T1-weighted image. (D) Axial diffusion-weighted image. The large lesion in the left frontal white matter shows multiple T2-hyperintense and T1-hypointense rings. Gadolinium enhancement and diffusion restriction are present in the outermost (active) rings. A small lesion is shown in the right hemisphere (arrow).

A 45-year-old man presented with progressive Broca aphasia and right hemiparesis. MRI demonstrated a large white matter lesion with multiple rings (figure). These centrifugal rings reflect concentric layers of active demyelination, typical for Baló concentric sclerosis.[1] CSF showed oligoclonal bands and a mild pleocytosis. Partial recovery followed 5 days of treatment with IV methylprednisolone (1 g daily). Baló concentric sclerosis, a rare variant of multiple sclerosis, was long thought to have a progressive and fatal course. The present case confirms the possibility of a more benign course in some cases.[2]

AUTHOR CONTRIBUTIONS

All authors contributed equally in the interpretation of data and in drafting and revising the manuscript.

REFERENCES

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2. Karaarslan E, Altintas A, Senol U, et al. Balo's concentric sclerosis: clinical and radiologic features of five cases. AJNR Am J Neuroradiol 2001;22:1362–1367.

MYSTERY CASE RESPONSES

The Mystery Case series was initiated by the *Neurology*® Resident & Fellow Section to develop the clinical reasoning skills of trainees. Residency programs, medical student preceptors, and individuals were invited to use this Mystery Case as an education tool. Responses were solicited through a group e-mail sent to the American Academy of Neurology Consortium of Neurology Residents and Fellows and through social media. All the answers that we received came from individual residents rather than groups and they were all well-reasoned and thoughtful. The majority of them came through social media. Many respondents (24%) have correctly identified the neuroradiologic features of Baló concentric sclerosis. Alternate diagnoses that were proposed included CNS lymphoma (17%) and infection (10%).

This Mystery Case illustrates a rather rare demyelinating disease that previously was considered to have a rapidly progressive monophasic course, similar to the Marburg variant of multiple sclerosis. This report is consistent with a line of evidences suggesting that Baló concentric sclerosis could have a more indolent course with prolonged survival or spontaneous remission.

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