Eccentric Target Sign: Think Neurotoxoplasmosis

The Neurohospitalist
2019, Vol. 9(3) 176
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DOI: 10.1177/1941874418809880
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Keywords

toxoplasmosis, HIV, AIDS

Figure 1. Brain MRI. Axial FLAIR (A) and coronal T2 (B)-weighted images demonstrate a right nucleocapsular isointense lesion with a rounded high signal nodule in the periphery with perilesional edema. Axial (C) and sagittal T1 (D)-weighted images demonstrate a ring-enhancing lesion with an eccentrically located enhancing mural nodule, characterizing the sign. Follow-up axial Fluid-attenuated inversion recovery (FLAIR) image (E) 4 weeks after treatment demonstrating a significant reduction of the lesion. MRI indicates magnetic resonance imaging.

A 50-year-old woman started a 1-month history of progressive left hemiparesis and headache. Symptoms have progressed to mental deterioration, being necessary orotracheal intubation. A brain magnetic resonance imaging was performed (Figure 1). Eccentric target sign was found and cerebral toxoplasmosis suspected. HIV serologic test confirmed infection. Sulfadiazine, pyrimethamine, leucovorin, and adjunctive corticosteroids were started, with good clinical and radiological response.

Eccentric target sign is characterized by a ring-shaped zone of peripheral enhancement with a small eccentric nodule along the wall. Although considered highly suggestive of toxoplasmosis, this sign is seen in less than one-third of cases.^{1,2}

Authors' Note

Daniel Venturino Nassif contributed to study concept, design, and supervision. Felipe Resende Nobrega contributed to study concept and design.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

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