Teaching NeuroImages: Deep gray matter involvement in neurobrucellosis

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Figure Imaging

Cranial MRI T2-weighted axial (A), T1-weighted axial (B), and T2 fluid-attenuated inversion recovery coronal (C) showing bilateral periventricular and basal ganglia hyperintensities with no contrast enhancement or mass effect. (D) Follow-up imaging at 1.1 months showing reduction in T2 hyperintensities in the right putamen, left caudate, and periventricular white matter.

A 27-year-old man, recent visitor to the Middle East, presented with 6-week history of fever (up to 102°F) followed by altered behavior and left hemiparesis. CSF was acellular with raised protein (138 mg/dL). CSF bacterial culture was sterile; adenosine deaminase normal

(3 U/L); cryptococcal antigen, Venereal Disease Research Laboratory test, and Japanese B serology were negative. HIV serology and vasculitic workup were unremarkable. Serum *Brucella* agglutination titer was 320 IU (immunoglobulin M fraction 280 IU). Cranial MRI showed

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nonenhancing bilateral white matter and basal ganglia hyperintensities on T2-weighted images (figure, A–C). The patient was treated with IV ceftriaxone (1 month) along with oral doxycycline and rifampicin (4 months). At 3 months, *Brucella* agglutination titer was <20 IU and the patient became independent. Follow-up imaging showed a reduction in lesions (figure, D). Brucellosis frequently presents as chronic meningitis along with cranial neuropathies and spinal arachnoiditis.¹ Demyelinating lesions are described in neurobrucellosis,^{1,2} involvement of the deep gray matter being unusual.

AUTHOR CONTRIBUTIONS

Roopa Rajan: data collection, drafting of manuscript. Dheeraj Khurana: revision of manuscript, concept of manuscript. Praveen Kesav: data collection, review of literature.

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DISCLOSURE

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REFERENCES

1. Ceran N, Turkoglu R, Erdem I, et al. Neurobrucellosis: clinical, diagnostic, therapeutic features and outcome: unusual clinical presentations in an endemic region. *Braz J Infect Dis* 2011;15:52–59.
2. Al-Sous MW, Bohlega S, Al-Kawi MZ, Alwatban J, McLean DR. Neurobrucellosis: clinical and neuroimaging correlation. *AJNR Am J Neuroradiol* 2004;25:395–401.

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