Teaching NeuroImages:

Brucellosis mimicking demyelinating disease

A. Abrahão, MD
C.C.H. de Aquino, MD
J.L. Pedroso, MD
R.F. Baiense, MD
R.A. Oliveira, MD
V.M. Jorge, MD
O.G.P. Barsottini, MD,
PhD

Address correspondence and
reprint requests to Dr. J.L.
Pedroso, Departamento de
Neurologia e Neurocirurgia,
Universidade Federal de São
Paulo, Rua Pedro de Toledo, 650,
CEP 04039-000, São Paulo, SP,
Brazil
zeluizpedroso@yahoo.com.br

Figure Brain imaging

Fluid-attenuated inversion recovery (first row) and T2-weighted (second row) brain MRI (1.5 T) showed diffuse white matter hyperintensities (A), evolving to confluent lesions 1 month later (B). T1-weighted brain MRI showed no gadolinium enhancement and no corpus callosum involvement was found. (C) Follow-up imaging 1 year after treatment. These findings are atypical for demyelinating diseases, but are consistent with neurobrucellosis.¹

A 57-year-old man presented with a 4-week history of fever, visual loss, and progressive ataxic gait. He worked as a truck driver and had been in contact with raw sheepskin a few months prior. Neurologic examination showed drowsiness, pseudobulbar syndrome, hyperreflexia, ataxia, and optic disc edema. He had a lymphocytic pleocytosis and diffuse hyperintense white matter lesions on brain MRI (figure). Serum and urine PCR were positive for *Brucella* spp. Rheumatologic and other serologic tests were negative. Partial improvement was achieved with doxycycline, rifampin, and trimethoprim-sulfamethoxazole.

Brain MRI suggesting demyelinating disease with atypical clinical presentation should raise other diagnostic possibilities such as nervous system infections and acute disseminated encephalomyelitis.^{1,2}

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From the Departments of Neurology and Neurosurgery (A.A., C.C.H.d.A., J.L.P., R.F.B., R.A.O., O.G.P.B.) and Medicine (V.M.J.), Universidade Federal de São Paulo, São Paulo, Brazil.

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