Teaching NeuroImages: Diffuse cerebral neurosarcoidosis mimicking gliomatosis cerebri

A 30-year-old man with a history of bipolar disease presented with 6 months of cognitive decline, unsteady gait, urinary retention, and bilateral upper extremity tremors. Multiple punctate enhancing lesions were seen on brain MRI (figure). Differential diagnosis included infection (viral, tuberculosis, or cryptococcus), toxic leukoencephalopathy, gliomatosis cerebri, angiocentric lymphoma, and neurosarcoidosis. CT chest scan, CSF studies, HIV testing, hepatitis panel, drug screen, and vasculitis panel were negative. Brain biopsy revealed neurosarcoidosis. The patient responded well to high-dose steroids and IV cyclophosphamide. MRI in neurosarcoidosis often reveals enhancing periventricular white matter lesions, in this case mimicking diffuse gliomatosis cerebri.1,2

(A) MRI axial fluid-attenuated inversion recovery (FLAIR) sequence demonstrating extensive periventricular white matter, and basal ganglia hyperintensities. (B) Sagittal FLAIR demonstrating corpus callosal hyperintensity. (C) Contrast-enhanced T1 showing multiple punctate enhancing lesions in subcortical white matter suggesting infection or malignancy. (D) Hematoxylin & eosin staining showing granulomatous inflammation (arrow), consistent with neurosarcoidosis.

AUTHOR CONTRIBUTIONS
Dr. Ramanathan, Dr. Malhotra, and Dr. Scott: design and interpretation of the study and preparation of the manuscript.

STUDY FUNDING
No targeted funding reported.

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

REFERENCES

From the Department of Neurology, Drexel University College of Medicine, Allegheny General Hospital, Pittsburgh, PA.
Teaching NeuroImages: Diffuse cerebral neurosarcoidosis mimicking gliomatosis cerebri
Ramnath Santosh Ramanathan, Konark Malhotra and Thomas Scott
Neurology 2013;81:e46
DOI 10.1212/WNL.0b013e3182a08d47

This information is current as of August 12, 2013

Updated Information & Services
including high resolution figures, can be found at:
http://www.neurology.org/content/81/7/e46.full.html

Supplementary Material
Supplementary material can be found at:
http://www.neurology.org/content/suppl/2013/08/11/81.7.e46.DC1

References
This article cites 2 articles, 1 of which you can access for free at:
http://www.neurology.org/content/81/7/e46.full.html#ref-list-1

Permissions & Licensing
Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at:
http://www.neurology.org/misc/about.xhtml#permissions

Reprints
Information about ordering reprints can be found online:
http://www.neurology.org/misc/addir.xhtml#reprintsus