CNS angiitis as a brain tumor mimic with a branching vascular abnormality on T2* MRI

Figure 1 CNS angiitis with a branching vascular pattern

Axial T1 (A), T1 postcontrast (B), T2 fluid-attenuated inversion recovery (C), and T2* MRI (D) of secondary CNS angiitis/venulitis. The branching centrally draining venous pattern on T2* (arrow) corresponding to engorged/thrombosed venules/veins is key to identifying the vascular etiology and distinguishing from neoplasm.

A 24-year-old woman with slowly progressive altered mental status and fevers was found to have multiple brain mass lesions. A characteristic branching vascular pattern on T2* MRI (figure 1D) was key to identifying these mass lesions as vascular in origin. CSF was inflammatory and serologic testing supported the diagnosis of systemic lupus erythematosus with concomitant CNS angiitis affecting deep medullary and ependymal veins, with resulting inflammation, hemorrhage, and infarct. Symptoms and mass effect/edema improved with steroid treatment and time. CNS angiitis can present as an intracranial mass lesion.^{1,2} The branching venous pattern on T2* MRI (figures 1D and 2D) is key to distinguishing from neoplasm.

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Author contributions: Marc Mabray: drafting/revising the manuscript for content, including medical writing for content, study concept or design, analysis or interpretation of data. Soonmee Cha: drafting/revising the manuscript for content, including medical writing for content, study concept or design, analysis or interpretation of data.

Study funding: Marc Mabray was supported by an NIH T32 grant (5T32EB001631-10). The funding body had no role in the performance of the study.

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

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Figure 2 Companion case of primary CNS angiitis/venulitis

Coronal T2 fluid-attenuated inversion recovery (A), coronal T1 postcontrast (B), axial T1 postcontrast (C), and axial T2* MRI (D) of a companion case of primary CNS angiitis/venulitis. The branching centrally draining venous pattern on T2* (arrow) corresponding to engorged/thrombosed venules/veins is key to identifying the vascular etiology and distinguishing from neoplasm.

1. Molloy ES, Singhal AB, Calabrese LH. Tumour-like mass lesion: an under-recognised presentation of primary angiitis of the central nervous system. *Ann Rheum Dis* 2008;67:1732–1735.
2. Katsicas MM, Russo R, Taratuto A, Pocięcha J, Zelazko M. Primary angiitis of the central nervous system presenting as a mass lesion in a child. *J Rheumatol* 2000;27:1297–1298.

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Neurology 2015;85;1819-1820
DOI 10.1212/WNL.0000000000002133

This information is current as of November 16, 2015

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