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Teaching NeuroImage: Primary CNS Vasculitis Mimicking Intracranial Tumor

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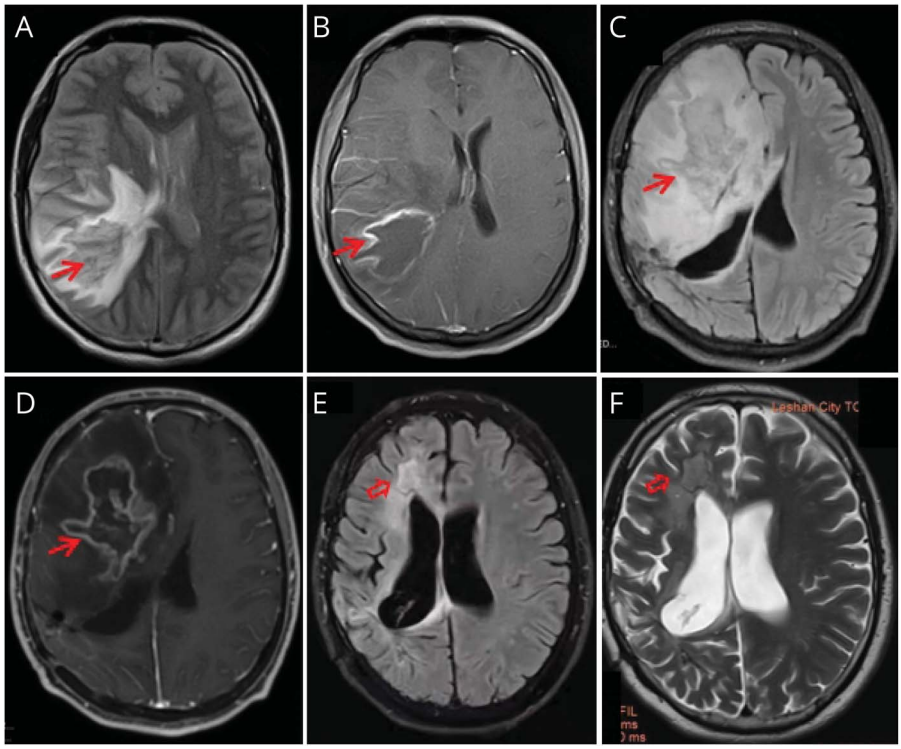
Figure 1 MRI of the Brain



Brain MRI demonstrates hyperintense irregular mass within the right frontotemporal and parietal lobes with perifocal edema and ring enhancement (A–B). A lesion appeared in the right frontotemporal lobe and corpus callosum, and the anterior horn of the right ventricle was significantly compressed (C–D). MRI lesion largely disappeared after immunosuppressant therapy (E–F).

A 21-year-old man with headache, vomiting, and limb weakness presented to the clinic 2 years ago. An examination showed paresthesia and weakness in left upper and lower limbs. An examination of the brain MRI demonstrated a large space-occupying lesion with ring enhancement and compression of the right fronto-tempo-parietal lobes (Figure 1, A and B). The patient underwent surgery for a presumed glioblastoma. Pathologic examination revealed primary central vasculitis (PCNSV) without neoplasm (Figure 2). His screening workup for systemic vasculitis showed negative results. Symptoms improved after a corticosteroid taper. After stopping immunosuppressive therapy for 1 year, new lesions were found again in the right frontotemporal lobe (Figure 1, C and D). Corticosteroids and mycophenolate mofetil were given, and the patient's symptoms significantly improved and lesions on MRI had subsided significantly (Figure 1, E and F). MRI findings of PCNSV

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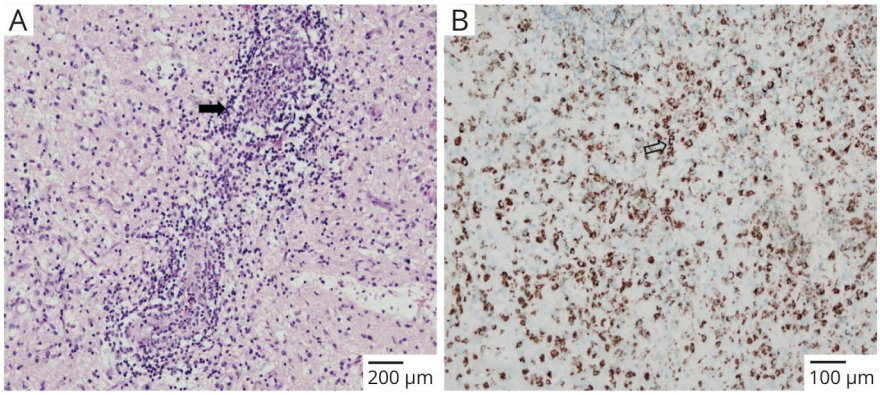
Figure 2 Pathology Slide



H&E (A) showed necrosis of small blood vessels with perivascular infiltrates of lymphocytes. Anti-CD68 immunostain (B) demonstrating macrophage expression. H&E = hematoxylin & eosin.

frequently present as nonspecific white matter lesions.[1] It can mimic glioblastoma,[2] CNS lymphoma, and tumefactive multiple sclerosis.[1]

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Author Contributions

H. Sun: drafting/revision of the article for content, including medical writing for content; major role in the acquisition of data; study concept or design; and analysis or interpretation of data. S. Zhang: analysis or interpretation of data. T. Yu: analysis or interpretation of data. D. Zhou: drafting/revision of the article for content, including medical writing for content; major role in the acquisition of data. J. Li: drafting/revision of the article for content, including medical writing for content; major role in the acquisition of data; and analysis or interpretation of data.

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References

1. Hajj-Ali RA, Calabrese LH. Central nervous system vasculitis: advances in diagnosis. *Curr Opin Rheumatol.* 2020;32(1):41-46.
2. Jin H, Qu Y, Guo Z-N, Cui G-Z, Zhang F-L, Yang Y. Primary angiitis of the central nervous system mimicking glioblastoma: a case report and literature review. *Front Neurol.* 2019;10:1208.

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