

Progressive Neurologic Symptoms in the Setting of HIV

A Rare Case of Neurosymptomatic CSF HIV Escape

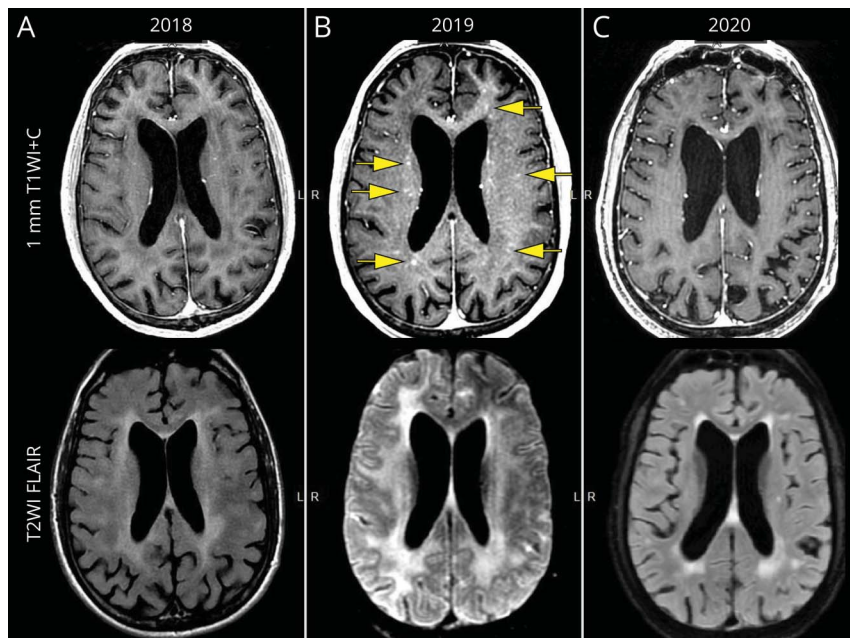
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Figure 1 MRIs Over the Disease Course of Neurosymptomatic CSF HIV Escape



(A) 2018: nonspecific confluent areas of white matter T2-weighted fluid-attenuated inversion recovery (FLAIR) hyperintensity, commonly seen with HIV encephalopathy. (B) 2019: worsening symptoms, worsening white matter T2-weighted FLAIR hyperintensity, and new, stippled perivascular distribution enhancement (arrows), not characteristic of HIV encephalopathy. (C) 2020: after modified antiretroviral therapy targeted for neural penetration, enhancement and T2-weighted FLAIR hyperintensity improved.

A 54-year-old man with HIV infection on suppressive antiretroviral therapy (ART) presented with progressive gait difficulty over 1 year. MRI demonstrated increasingly predominant white matter hyperintensity and development of abnormal perivascular enhancement (figure 1). An extensive workup excluded atypical infections, CNS lymphoma, sarcoidosis, vasculitis, and other autoimmune diseases. Serum HIV viral RNA was 160 copies/mL; CSF HIV viral RNA was 1,390 copies/mL with a mild lymphocytic pleocytosis, consistent with a diagnosis of neurosymptomatic CSF HIV escape, viral CSF sequestration despite ART.¹ Whereas white matter hyperintensity is

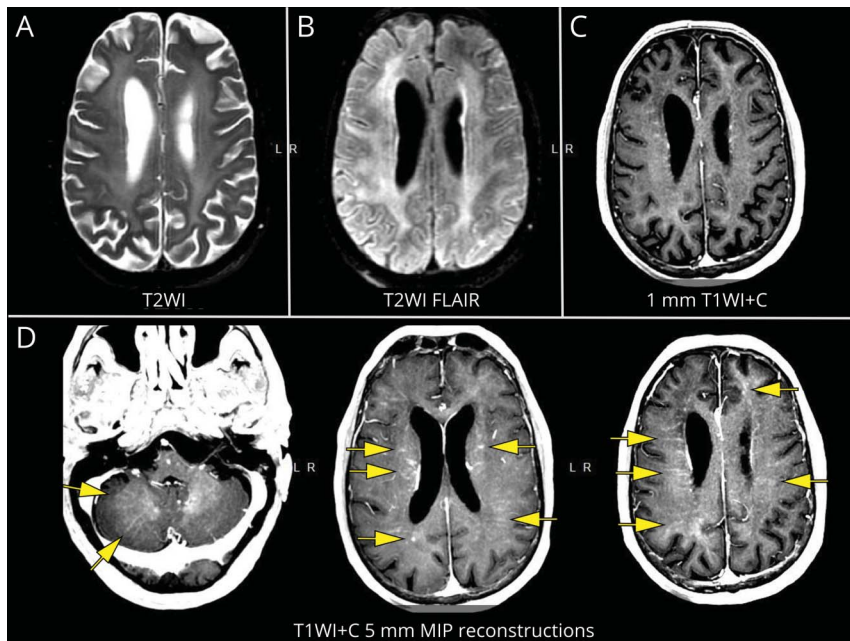
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Figure 2 Value of Maximum Intensity Projection (MIP) Images for Subtle Perivascular Enhancement



2019 MRI during maximal symptomatology. (A) T2-weighted imaging (T2WI) and (B) T2-weighted fluid-attenuated inversion recovery (FLAIR) images with diffuse cerebral white matter hyperintensity. (C) Abnormal enhancement on T1-weighted post-contrast (T1WI + C) images with subtle stippling in a perivascular distribution; however, (D) T1-weighted postcontrast MIPs highlight the linear perivascular (arrows) and surrounding patchy parenchymal enhancement.

nonspecific in HIV, the key to CSF HIV escape diagnosis is recognizing the abnormal perivascular enhancement (figure 2).² Clinical course and imaging findings improved with modified ART targeting neuropenetration.

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Disclosure

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

Appendix Authors

Name	Location	Contribution
Laura B. Eisenmenger, MD	Department of Radiology, University of Wisconsin–Madison	Designed and conceptualized study, major role in the acquisition of data, analyzed the data, drafted the manuscript for intellectual content

Appendix (continued)

Name	Location	Contribution
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James M. Sosman, MD	Department of Medicine, University of Wisconsin–Madison	Analyzed the data, edited the manuscript for intellectual content
Howard A. Rowley, MD	Department of Radiology, University of Wisconsin–Madison	Major role in the acquisition of data, analyzed the data, revised the manuscript for intellectual content
Anthony D. Kuner, MD	Department of Radiology, University of Wisconsin–Madison	Designed and conceptualized study, analyzed the data, revised the manuscript for intellectual content

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