36 y/o male with a history of HIV presenting with progressive dementia, gait disturbance and tremors

Jignesh Modi, MD

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Axial CT

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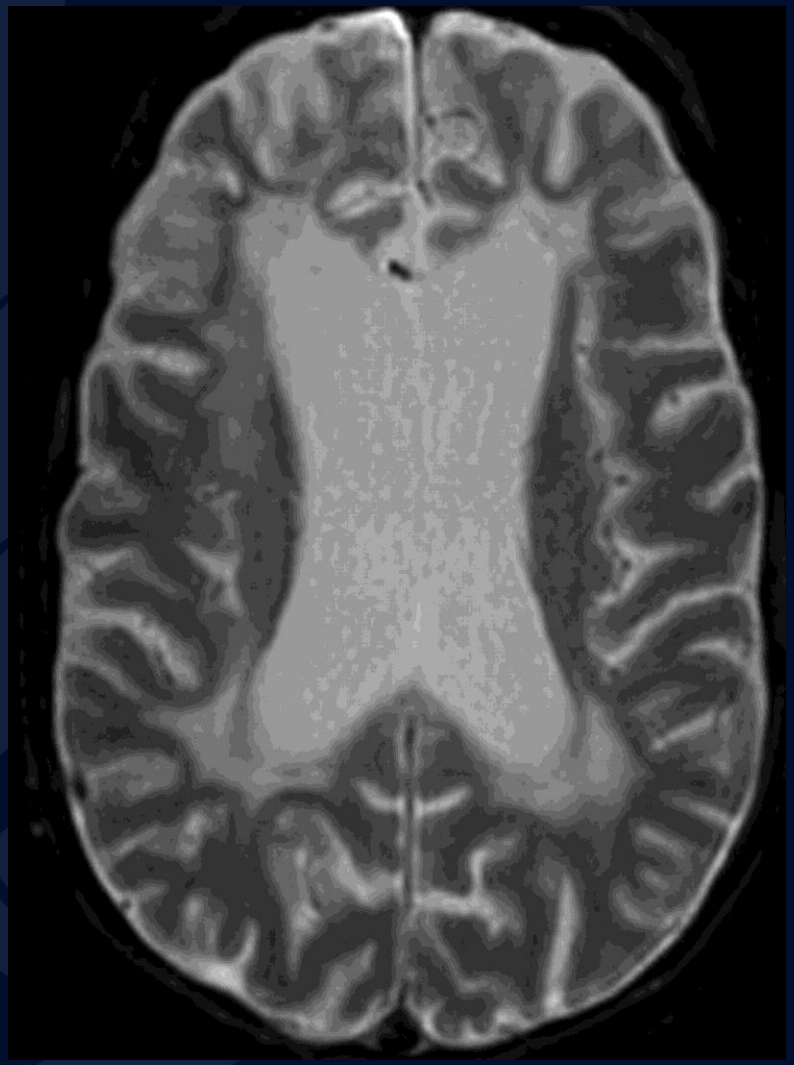
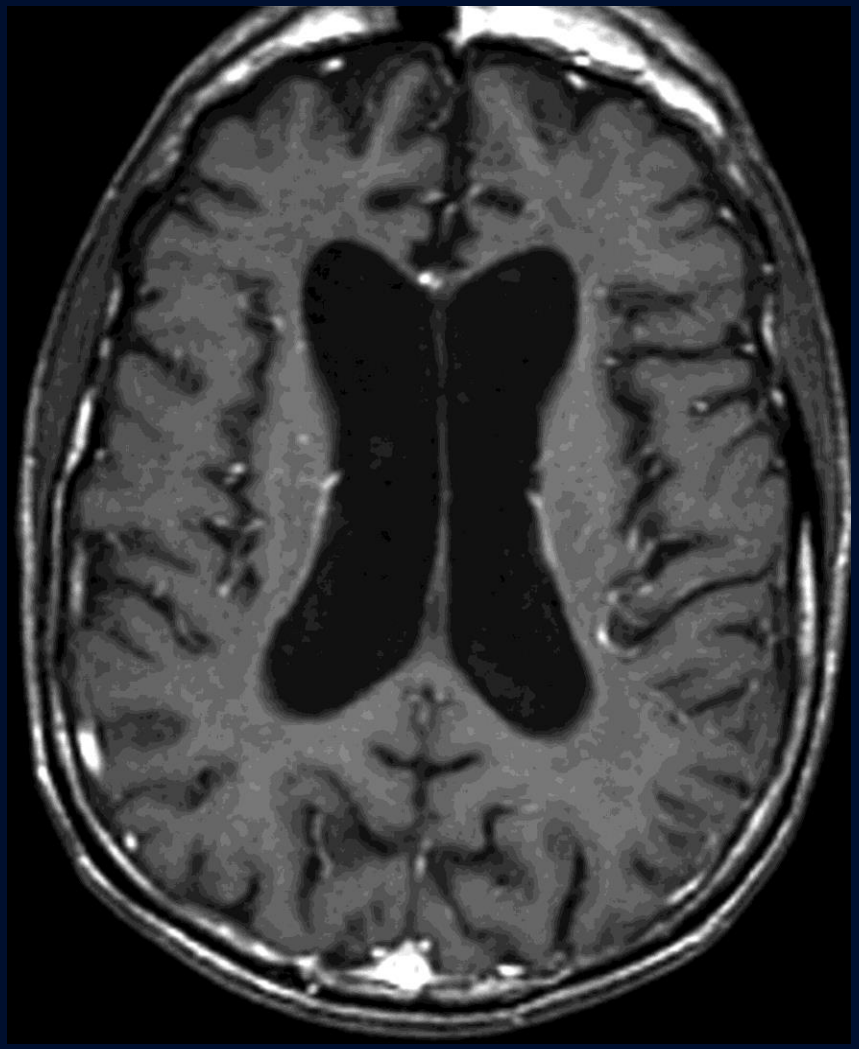
Axial T2 MRI



Axial T1 Post-Contrast MRI



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Chronic HIV Encephalitis

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Prominent sulci

Diffuse volume loss, more than expected for age

Enlarged lateral ventricles

Axial CT

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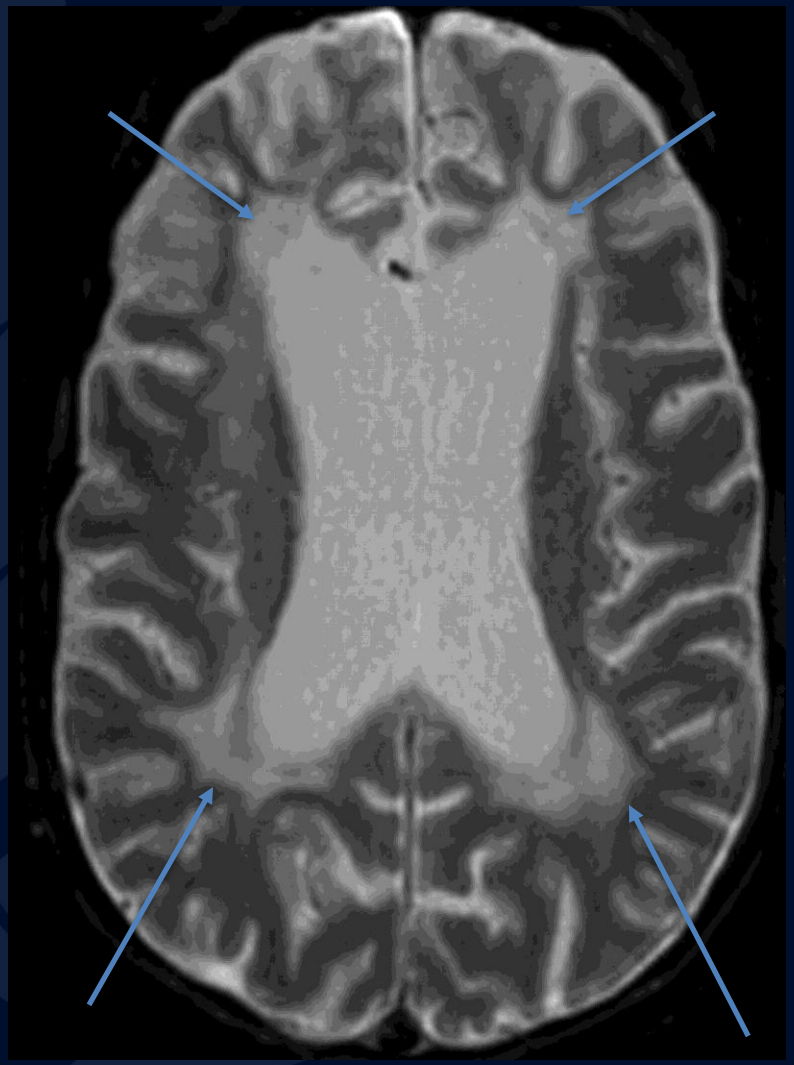
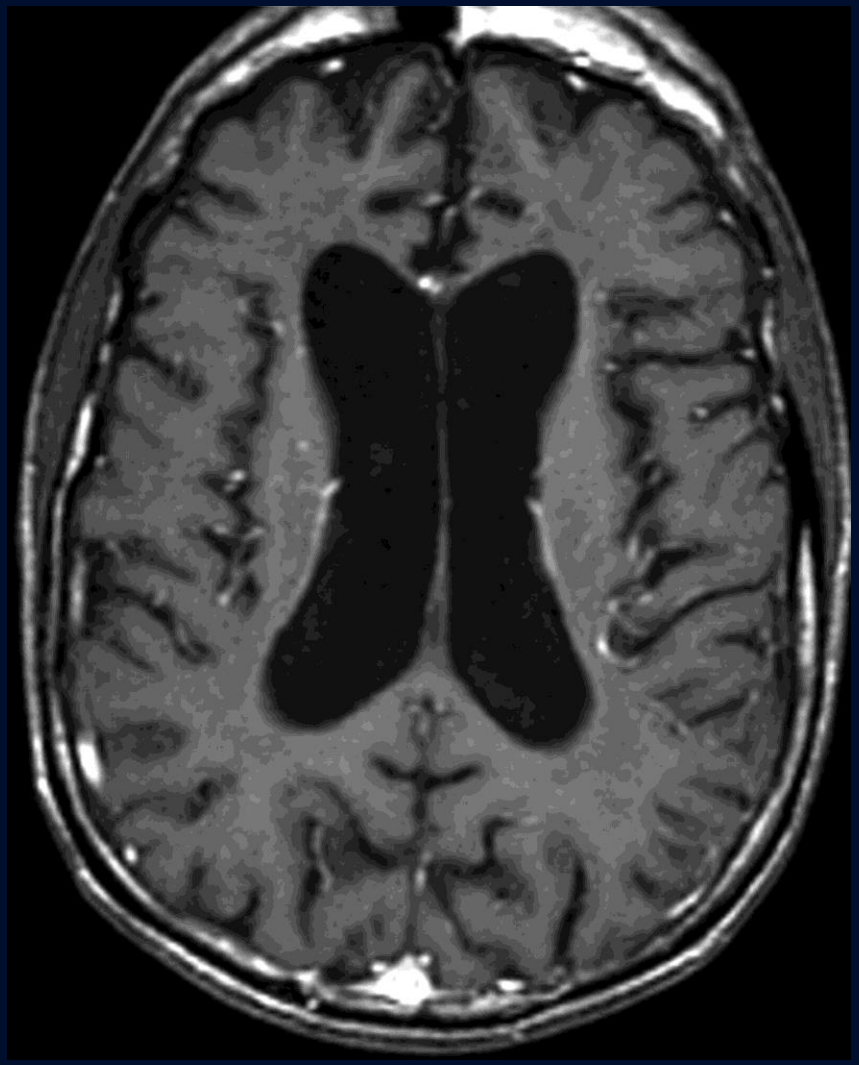
Axial T2 MRI



Axial T1 Post-Contrast MRI



Symmetric periventricular white matter T2 hyperintensity

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AIDS Dementia Complex (Chronic HIV Encephalitis)

- Chronic HIV-associated neurodegenerative syndrome characterized by progressive cognitive and motor impairment, as well as atrophic changes in the brain
- Predominantly affects the white matter by producing demyelination and gliosis
- Occurs in later stages of AIDS
  - CD4 counts < 200 cells/μL, longer duration of HIV infection, and older age at seroconversion are at most risk for developing AIDS dementia complex
  - Severity is related to patient's viral load and can regress with ART
  - Superimposed infection may lead to fulminant disease
- Overall prognosis is not good, generally leading to death in less than a year

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Imaging Findings

- Imaging features of AIDS dementia complex are frequently referred to as HIV encephalitis
- Diffuse, symmetric cerebral atrophy that is out of proportion for the patient's age
- Symmetric, abnormal low attenuation in the periventricular and deep white matter
- No mass effect or enhancement.
  - If either of these findings are present, another diagnosis must be considered
- Proton (^{1}H) MR spectroscopy reveals decreased *N*-acetylaspartate (NAA) and elevated peaks of in choline and myoinositol.

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