

Images in Infectious Diseases

Detection of meningovascular neurotuberculosis through intracranial vessel wall imaging

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A 35-year-old homeless man presented with a sudden loss of left limb strength with brachial predominance and a recent history of weight loss and cough. Brain magnetic resonance imaging (MRI) revealed patchy foci of leptomeningeal nodular enhancement and acute ischemia in the right lentiform nucleus (**Figure 1**). Vessel wall imaging revealed circumferential smooth enhancement in the right M1 and left M2 segments, suggestive of vasculitis secondary to an inflammatory/infectious process (**Figures 2 and 3**).

The patient was HIV positive, with immunosuppression stigmas, such as oropharyngeal candidiasis, and off antiretroviral therapy (CD4: 9 cells/mm³ and viral load: 364.891/mL). Chest computed tomography revealed diffuse miliary lung nodules; a cerebrospinal fluid polymerase chain reaction test was positive for neurotuberculosis.

Cerebral vasculitis, which corresponds to the inflammation of blood vessel walls, may occur as a complication of neurotuberculosis and lead to secondary strokes^{1,2,3}.

Magnetic resonance vessel wall imaging is a non-invasive method capable of detecting vascular inflammation, and arterial abnormalities may persist after treatment. Moreover, residual vascular lesions may be a source of disease recurrence. Therefore, follow-up studies may be helpful^{1,2}.

Vessel wall enhancement with the absence of vascular complications, such as infarction, may significantly improve prognosis, with early treatment initiated to prevent complications^{1,2}.

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AUTHORS' CONTRIBUTION

PMBD: Conception and design of the study, acquisition of data, drafting the article, image selection, approval of the final version

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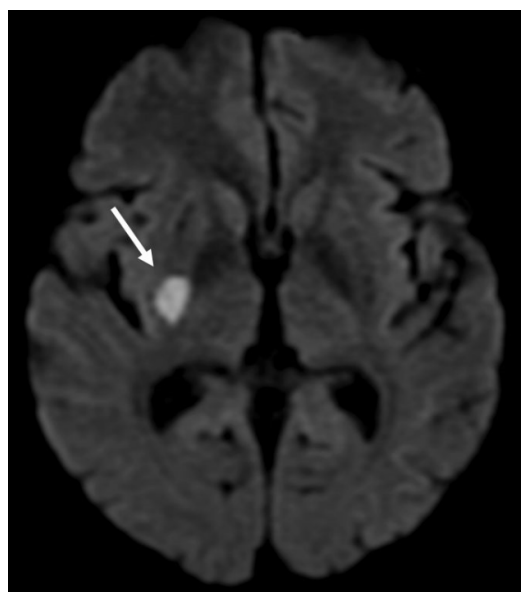


FIGURE 1: Axial diffusion-weighted image showing acute infarction in the right lentiform nucleus (white arrow).

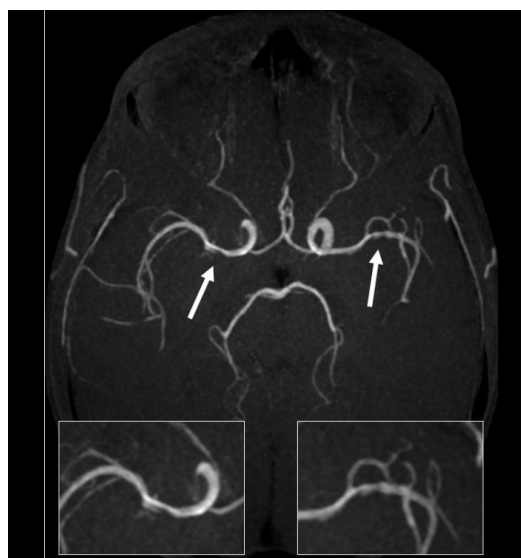


FIGURE 2: Time-of-flight angio-MRI sequence demonstrating irregular stenosis (white arrows) along medium cerebral arteries.

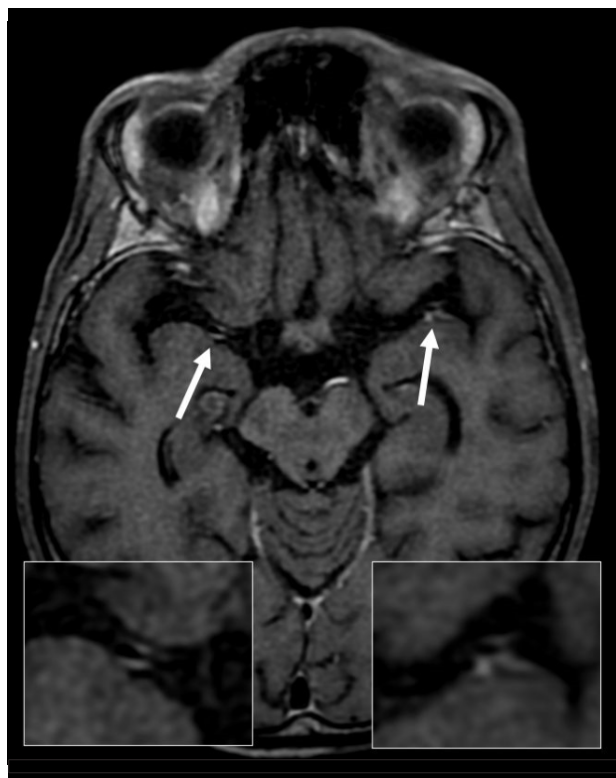


FIGURE 3: Vessel wall imaging sequence demonstrating circumferential parietal contrast enhancement (white arrows) in the right M1 and left M2 segments.

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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