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Medical Imagery

Progressive multifocal leukoencephalopathy with immune reconstitution inflammatory syndrome misdiagnosed as cerebral toxoplasmosis in an HIV-infected woman☆

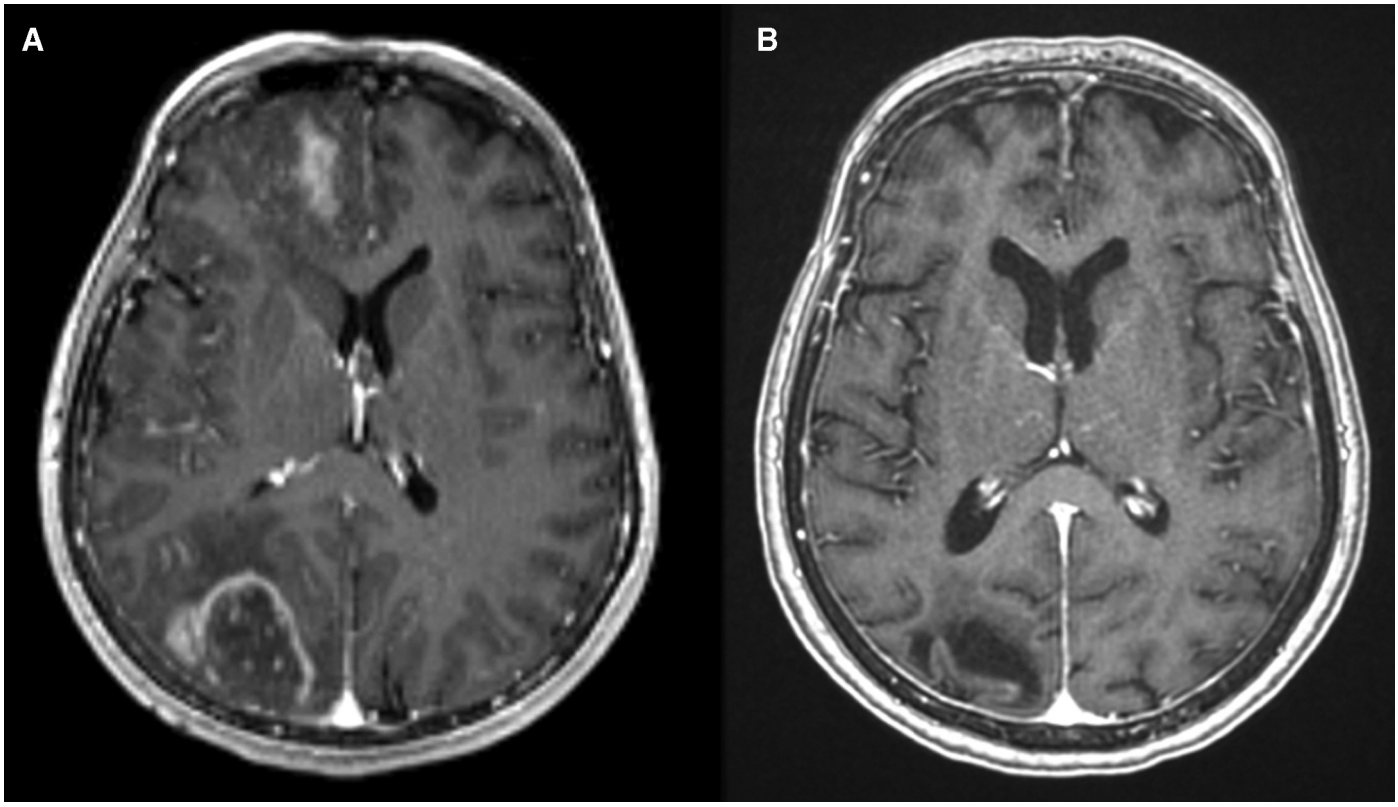

Figure 1. Cerebral magnetic resonance imaging: (A) multifocal ring-enhancing lesions; (B) image enhancement fading within 3 months of oral steroid therapy.

A 53-year-old woman presenting with oral candidiasis was diagnosed with HIV-1 infection. The CD4 cell count nadir was 71 cells/mm^3 (5%) and viral load was 445 000 copies/ml. Treatment was initiated with emtricitabine/tenofovir and boosted darunavir. One month later, she presented seizures with psychomotor slowdown, left upper-limb paresis, cerebellar syndrome, left homonymous hemianopsia, and cortical blindness. Her HIV viral load had decreased dramatically (968 copies/ml); the CD4 count was 57 cells/mm^3 (9%). Cerebral magnetic resonance imaging identified multifocal ring-enhancing lesions (Figure 1A). Although other diagnoses could have been considered, cerebral toxoplasmosis was suspected on the grounds of frequency, and sulfadiazine–pyrimethamine was initiated. Two weeks later, the seizures recurred and progressive multifocal leukoencephalopathy (PML) was finally diagnosed from the presence of JC virus DNA in cerebrospinal fluid, serum, and brain biopsy. Cerebral toxoplasmosis was ruled out by the small mass effect of cerebral lesions and the absence of Toxoplasma DNA in the brain. Despite a moderate

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change in CD4 cell count, immune reconstitution inflammatory syndrome (IRIS) was suggested by the atypical contrast enhancement pattern.[1] Brain histology confirmed overwhelming CD8 T-cell infiltration, congruent with criteria for PML–IRIS.[2] Steroids and mirtazapine were initiated to slow down brain deterioration. Fading of contrast enhancement within 3 months confirmed the diagnosis of PML–IRIS (Figure 1B). PML–IRIS should be considered as a differential diagnosis to toxoplasmosis in moderate oedematous lesions, especially after the initiation of highly active antiretroviral therapy, and regardless of variation in CD4 cell count.[3]

Conflict of interest: We declare no competing interests.

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