Progressive multifocal leukoencephalopathy with selective involvement of the pyramidal tracts

Alexander Semmler, MD; Horst Urbach, MD, PhD;
Thomas Klockgether, MD, PhD; and Michael Linnebank, MD,
Bonn, Germany

A 67-year-old man with chronic lymphatic leukemia presented with a 1-month history of subacute right hemiparesis with right central facial palsy and right extensor plantar response, but without sensory deficits. MRI showed hyperintense lesions along the pyramidal tracts on T2-weighted and FLAIR images (figure). CSF PCR revealed JC virus infection leading to the diagnosis multifocal leukoencephalopathy (PML), which typically occurs in immunocompromised patients, due to reactivation of latent JC virus infection. PML lesions are hyperintense on T2-weighted and FLAIR MRI, nonenhancing, not space occupying, and predominantly subcortically located involving the arcuate (U) fibers. Posterior fossa and basal ganglia lesions are less frequent (15 to 30% of patients) and rarely occur isolated. A faint, peripheral enhancement is seen in up to 10% of patients.¹

Thus far, PML with a predominant involvement of the pyramidal tract has been described only in one (HIV-positive) patient.²

1. Whiteman ML, Post MJ, Berger JR, Tate LG, Bell MD, Limonte LP. Progressive multifocal leukoencephalopathy in 47 HIV-seropositive patients: neuroimaging with clinical and pathologic correlation. *Radiology* 1993;187:233–240.
2. Sobha N, Sinha S, Taly AB, et al. Progressive multifocal leukoencephalopathy with discrete involvement of pyramidal tract. *J Neurol Neurosurg Psychiatry* 2005;76:24.

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Address correspondence and reprint requests to Dr. Michael Linnebank, University Hospital Bonn, Dept. of Neurology, Sigmund-Freud-Str. 25, 53105 Bonn, Germany; e-mail: Michael.Linnebank@ukb.uni-bonn.de

Figure. Coronal FLAIR fast spin echo sequence shows hyperintense lesions along the pyramidal tracts with a predominant involvement of the left side corresponding with the clinical picture.

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