Progressive Multifocal Leukoencephalopathy with Wallerian Degeneration

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A 39-year-old male presented with slurred speech, left hand weakness, gait unsteadiness and headaches over a period of 4 weeks. A brain MRI revealed a right motor strip lesion with Wallerian degeneration along the pyramidal tract plus brain stem and cerebellar FLAIR changes without enhancement (fig. 1). Laboratory findings included a CD4 count of 56, HIV viral load of 2,597 and a positive CSF PCR for JC virus. The patient rapidly decompensated and expired shortly after admission.

Wallerian degeneration results from axonal disintegration following a stereotypical time course and is due to various pathologies including stroke [1, 2] and progressive multifocal leukoencephalopathy.

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Disclosure Statement

None.

References

- 1 Thomalla G, Glauche V, Weiller C, Röther J: Time course of wallerian degeneration after ischaemic stroke revealed by diffusion tensor imaging. *J Neurol Neurosurg Psychiatry* 2005;76:266–268.
- 2 Grässel D, Ringer TM, Fitzek C, et al: Wallerian degeneration of pyramidal tract after paramedian pons infarct. *Cerebrovasc Dis* 2010;30:380–388.

Fig. 1. FLAIR images demonstrating hyperintensity along the pyramidal tract, brain stem and cerebellum indicating Wallerian degeneration. This signal alteration most ipsilateral likely results from the infectious process.