Cranial nerve involvement in infratentorial progressive multifocal leukoencephalopathy

Figure MRI findings in infratentorial progressive multifocal leukoencephalopathy with cranial nerve involvement

The lesion showed hyperintensity on T2-weighted sequence (A) without mass effect (arrows). Both fluid-attenuated inversion recovery (B, C) and double inversion recovery (D) sequences confirmed the additional involvement of right cranial nerves V (arrowhead) and VIII (arrow).

A 71-year-old man presented with right hypoacusis following immunosuppressive therapy after liver transplantation.

MRI demonstrated T1-hypointense and T2-hyperintense white matter lesions involving the right middle cerebellar peduncle, adjacent pons, and cerebellum, consistent with progressive multifocal leukoencephalopathy (PML), confirmed with PCR in a CSF sample. Fluid-attenuated inversion recovery and double inversion recovery sequences revealed involvement of right cranial nerves V and VIII (figure).

CSF revealed normal cell counts, glucose, and protein. PCR for herpesviruses and toxoplasmosis and CSF culture for *Mycobacterium tuberculosis*, *Listeria monocytogenes*, and *Cryptococcus neoformans* were negative. Chest and abdominal CT were normal.

In PML, infratentorial white matter is a common area of involvement.^{1,2} Our patient suggests cranial nerve involvement is possible.

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Author contributions: Dr. Hodel: drafting/revising the manuscript, analysis or interpretation of data, acquisition of data. Dr. Outteryck: drafting/revising the manuscript, study concept or design, analysis or interpretation of data. Dr. Zéphir: drafting/revising the

manuscript. Dr. Rodallec: drafting/revising the manuscript, analysis or interpretation of data, study supervision. Dr. Zins: drafting/revising the manuscript. Dr. Vermersch: drafting/revising the manuscript, analysis or interpretation of data, acquisition of data. Dr. Leclerc: drafting/revising the manuscript, analysis or interpretation of data.

Dr. Hodel reports no disclosures. Dr. Outteryck has received funding for travel from Biogen Idec, Bayer Schering Pharma, Merck Serono, Novartis, Teva Pharmaceutical Industries Ltd, and Sanofi-Aventis and for speaker honoraria from Bayer Schering Pharma, Biogen Idec and Sanofi-Aventis. Dr. Zéphir has received funding for travel from Biogen Idec, Bayer Schering Pharma, Merck Serono, Novartis, Teva Pharmaceutical Industries Ltd, and Sanofi-Aventis and for speaker honoraria from Bayer Schering Pharma, Biogen Idec, Teva Pharmaceutical Industries Ltd, and Sanofi-Aventis. Dr. Rodallec and Dr. Zins report no disclosures. Dr. Vermersch serves on scientific advisory board for Biogen Idec, Bayer Schering Pharma, Merck Serono, Novartis, Teva Pharmaceutical Industries Ltd, Almirall, and Sanofi-Aventis; has received funding for travel and speaker honoraria from Biogen Idec, Bayer Schering Pharma, Novartis, Teva Pharmaceutical Industries Ltd, Sanofi-Aventis, and Merck Serono; and receives research support from Biogen Idec, Merck Serono, Sanofi-Aventis, Teva Pharmaceutical Industries Ltd, and Bayer Schering Pharma. Dr. Leclerc reports no disclosures. Go to Neurology.org for full disclosures.

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Neurology 2012;79;104-105

DOI 10.1212/WNL.0b013e31825dce72

This information is current as of July 2, 2012

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