ALS corticospinal degeneration on DWI
J.P. Cabello, MD, M. Riverol, MD, and J.C. Masdeu, MD, PhD, Pamplona, Spain

A 58-year-old woman experienced progressive gait slowing over 4 months. She had normal strength and reflexes, mute plantar responses, and no clinical or EMG lower motor neuron findings. MRI was obtained (figure). A month later, spasticity and hyperreflexia in the legs were noted, with bilateral Babinski signs. Widespread fasciculations became present on EMG, supporting the diagnosis of amyotrophic lateral sclerosis (ALS).

MRI evidence of corticospinal tract involvement can help to confirm upper motor neuron disease in ALS.1 The degenerating tract was specifically highlighted on diffusion-weighted imaging (DWI) because recent lesions appear bright on DWI, whereas older lesions do not.2


Figure. Fluid-attenuated inversion recovery (FLAIR) MRI (A) and diffusion-weighted imaging (DWI) (B). Both the periventricular white matter (arrowhead) and the corticospinal tracts (black arrows) appear bright on FLAIR, but only the corticospinal tracts, recently damaged, appear bright on DWI. The white arrows point to the Rolandic sulcus.

Address correspondence and reprint requests to Dr. Joseph C. Masdeu, Department of Neurological Sciences, C.U.N., University of Navarre Medical School, 31008 Pamplona, Spain; e-mail: masdeu@unav.es
ALS corticospinal degeneration on DWI
J. P. Cabello, M. Riverol and J. C. Masdeu

Neurology 2004;62;1834
DOI 10.1212/01.WNL.0000120554.29461.D8

This information is current as of May 24, 2004

Updated Information & Services
including high resolution figures, can be found at:
http://www.neurology.org/content/62/10/1834.full.html

References
This article cites 2 articles, 0 of which you can access for free at:
http://www.neurology.org/content/62/10/1834.full.html##ref-list-1

Subspecialty Collections
This article, along with others on similar topics, appears in the following collection(s):
Amyotrophic lateral sclerosis
http://www.neurology.org/cgi/collection/amyotrophic_lateral_sclerosis

DWI
http://www.neurology.org/cgi/collection/dwi

MRI
http://www.neurology.org/cgi/collection/mri

Permissions & Licensing
Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at:
http://www.neurology.org/misc/about.xhtml#permissions

Reprints
Information about ordering reprints can be found online:
http://www.neurology.org/misc/addir.xhtml#reprintsus