Visualization of Gray Matter Atrophy and Anterior Corticospinal Tract Signal Hyperintensity in Amyotrophic Lateral Sclerosis Using 7T MRI

Virginie Callot, PhD, Aurélien Massire, PhD, Maxime Guye, MD, PhD, Shahram Attarian, MD, PhD, and Annie Verschueren, MD

Figure 7T MRI

Two patients with amyotrophic lateral sclerosis (ALS) presenting with different phenotypic descriptions underwent 7T MRI examination: a man with left upper limb amyotrophy due to lower motor neuron–predominant ALS (ALS Functional Rating Scale [ALSFRS] 33/48, left upper limb Medical Research Council [ULMRC] scale 15/25, right ULMRC scale 25/25, upper motor neurons [UMNs] score 17/55), in whom anterior gray matter hemiatrophy could be seen.
(figure, A); and a woman with spastic tetraparesis due to UMN-predominant ALS (ALSFRS 34/48, left and right ULMRC 21/25, UMN 55/55) exhibiting lateral corticospinal but also anterior tracts hyperintensities (figure, B), while posterior and lateral sensory tracts were preserved. Consistent with respective clinical features, and in line with recent reports, these imaging findings open perspectives for white matter/grey matter impairment description in ALS at 7T.

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Disclosure
The authors report no disclosures. Go to Neurology.org/N for full disclosures.

Appendix

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<th>Name</th>
<th>Location</th>
<th>Contribution</th>
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<tbody>
<tr>
<td>Virginie Callot, PhD</td>
<td>CRMBM (Aix-Marseille Univ, CNRS) and CEMEREM</td>
<td>Study concept and design, acquisition of MRI data, data analysis, manuscript writing</td>
</tr>
<tr>
<td></td>
<td>(APHM, Hôpital Universitaire Timone), Marseille, France</td>
<td></td>
</tr>
<tr>
<td>Aurélien Massire, PhD</td>
<td>CRMBM (Aix-Marseille Univ, CNRS) and CEMEREM</td>
<td>Study design, data acquisition</td>
</tr>
<tr>
<td></td>
<td>(APHM, Hôpital Universitaire Timone), Marseille, France</td>
<td></td>
</tr>
<tr>
<td>Maxime Guye, MD, PhD</td>
<td>CRMBM (Aix-Marseille Univ, CNRS) and CEMEREM</td>
<td>Study concept, manuscript revision</td>
</tr>
<tr>
<td></td>
<td>(APHM, Hôpital Universitaire Timone), Marseille, France</td>
<td></td>
</tr>
<tr>
<td>Shahram Attarian, MD, PhD</td>
<td>Reference Centre for Neuromuscular Disorders and ALS (APHM, Hôpital Universitaire Timone), Marseille, France</td>
<td>Study concept, manuscript revision</td>
</tr>
<tr>
<td>Annie Verschueren, MD</td>
<td>Reference Centre for Neuromuscular Disorders and ALS (APHM, Hôpital Universitaire Timone), Marseille, France</td>
<td>Study concept and supervision, data analysis, manuscript writing</td>
</tr>
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References

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