

e-MS Experts' Summit Season 2020

Abstracts

MRI imaging in MS, an update: Diagnostic criteria and techniques

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According to the 2017 revisions of the McDonald criteria, magnetic resonance imaging (MRI) of the brain and spinal cord facilitates early and accurate diagnosis of MS.¹ Also, MRI provides prognostic information at the time of diagnosis, predicting long-term disability and conversion to progressive MS.²⁻⁴ After establishing an MS diagnosis and initiating treatment, MRI then plays a crucial role in monitoring subclinical inflammatory disease activity, the prediction of treatment response and safety monitoring.^{2,4}

For all of these purposes, there is a vital medical need to establish standardised MRI acquisition protocols for brain and spinal cord imaging. Furthermore, in addition to conventional MRI outcome measures – such as contrast-enhancing and active (new or enlarging) T2 lesions – quantitative MRI methods, including volumetric measurements, can provide further information, particularly regarding the neurodegenerative aspects of the disease.

To date, however, we have failed to integrate and implement these techniques in routine clinical practice in many centres. It is our responsibility to tackle this challenge, to further improve patient monitoring in the future and to incorporate new strategies such as pharmacodynamic approaches that will help us evaluate remyelination and neuronal repair.

References

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