

Multiple sclerosis and other demyelinating diseases: Treatment of MS and other neuroinflammatory diseases

Monitoring MS control

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Learning objectives

- To demonstrate the relevance of conventional MRI measures of disease activity to monitor MS evolution and treatment response
- To discuss the added contribution of advanced MRI techniques (e.g., brain and spinal cord atrophy) as a surrogate outcome for neurodegeneration and disability progression in MS
- To provide guidelines for the use of MRI to monitor MS evolution, treatment response and drug-related side effects

Key messages

- Conventional MRI techniques have provided useful markers to monitor treatment effect in MS
- The combination of clinical and MRI measures of disease activity has a role for identifying non-responders to MS treatments
- The routine use of MRI is recommended to monitor disease activity during treatment (at an individual patient level)
- Daily life guidelines are warranted to correctly apply MRI in the monitoring treatment response in patients with established MS
- A renewed paradigm of “MRI re-baseline” is needed for both lesional and atrophy measures with new disease-modifying drugs
- In the near future novel MR metrics will be validated and used to assess treatment response in clinical trials and in daily-life practice

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