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Insights Into MS

Timing of Treatment Initiation in MS

Treatment initiation in MS

- Early diagnosis and treatment initiation are important to help maintain neurological function and may help prevent subsequent disability^{1,2}
- While symptoms of MS may not be debilitating early in the disease course, initiation of treatment within 2 years of the first MS event, or clinically isolated syndrome, was shown to be associated with a 40% reduction in risk of disease progression^{1,3}
- The definition typically used to separate early vs delayed treatment is from 0.5 to 2 years⁴



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Factors with prognostic value

There are several features of MS that can be associated with disability progression and poor prognosis⁵:

Clinical factors and symptoms⁵

 Onset of symptoms affecting efferent pathways (eg, motor)

Multifocal onset

- Early cognitive impairment
- High relapse rate
 within the first 2 years



A retrospective review showed that early relapse (within 5 years) is associated with a 48% increased risk of disability over the short term, compared to patients with no relapse.⁶

Demographics⁵

- Non-White ethnicity
- Female
- Older age

Environmental and lifestyle factors⁵



Laboratory and neuroradiological factors⁵

- Presence of cerebrospinal oligoclonal bands
- High level of neurofilament light chain subunits
- Number and location of lesions
- New T2 lesion-formation in the first 5 years

MS, multiple sclerosis.

The patient perspective ()

- A patient survey showed that patients prioritize safety and efficacy in their MS treatments, and may be fearful of new therapies that may have significant side effects, especially if they feel they are doing well⁷
- There are also misconceptions about the route of administration of different DMTs that may impact compliance and adherence⁸
- Research shows that MS patients value being part of their treatment decisions and identify disease education as an unmet need⁹

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I had to be very proactive, push for my case and fight to have my opinion heard. Eventually I was switched to a newer treatment. I then realized that this was far more effective than previous drugs had been. I stopped experiencing relapses, and I felt less fatigue and that the 'brain fog' had lifted, which really improved my quality of life.¹⁰

Ongoing patient management



- Regular monitoring during treatment with DMTs and prompt adjustment of treatment if the patient is responding suboptimally is important¹¹
- Consensus guidelines recommend monitoring of disease activity should be completed at least annually and should include^{5, 11}:
 - Clinical evaluation relapse history, disability progression using EDSS
 - Brain MRI scan
 - Blood/CSF tests
 - Treatment history
 - Comorbidities
 - Lifestyle discussion

Routine monitoring and support



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CSF, cerebrospinal fluid; DMT, disease-modifying therapy; EDSS, Expanded Disability Status Scale; MRI, magnetic resonance imaging; MS, multiple sclerosis.

References

- 1. Ziemssen T, de Stefano N, Sormani P, et al. Optimizing therapy early in multiple sclerosis: an evidence-based view. Mult Scler Rel Dis. 2015;4:460-469.
- 2. Ziemssen T, Derfuss T, de Stefano N, et al. Optimizing treatment success in multiple sclerosis. J Neurol. 2016;263:1053-1065.
- 3. Kappos L, Freedman MS, Polman CH, et al. Effect of early versus delayed interferon beta-1b treatment on disability after a first clinical event suggestive of multiple sclerosis: a 3-year follow-up analysis of the BENEFIT study. Lancet. 2007;370:389-397.
- 4. Merkel B, Butzkueven H, Traboulsee AL, Havrdova E, Kalincik T. Timing of high-efficacy therapy in relapsing-remitting multiple sclerosis: a systematic review. Autoimmun Rev. 2017;16(6):658-665.
- 5. Filippi M, Bar-Or A, Preziosa P, et al. Multiple sclerosis. Nat Rev Dis Primers. 2018;4:43.
- 6. Tremlett H, Yousefi M, Devonshire V, et al. Impact of multiple sclerosis relapses on progression diminishes with time. Neurology. 2009;73:1616-1623.
- 7. Lynd LD, Henrich NJ, Hategeka C, et al. Perspectives of patients with multiple sclerosis on drug treatment: a qualitative study. Int J MS Care. 2018;20:269-277.
- 8. Ben-Zacharia A, Adamson M, Boyd A, et al. Impact of shared decision making on disease-modifying drug adherence in multiple sclerosis. Int J MS Care. 2018;20:287-297.
- 9. Heesen C, Solari A, Giordano A, Kasper J, Köpke S. Decisions on multiple sclerosis immunotherapy: new treatment complexities urge patient engagement. J Neurol Sci. 2011;306 (1-2):192-197.
- 10. Giovannoni G, Butzkueven H, Dhib-Jalbut S, et al. Brain health: time matters in multiple sclerosis. Mult Scler Relat Dis. 2016;9(suppl 1):S5-S48.
- 11. Hobart J, Bowen A, Pepper G, et al. International consensus on quality standards for brain health-focused care in multiple sclerosis. Mult Scler. 2019;25(13):1809-1818.

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