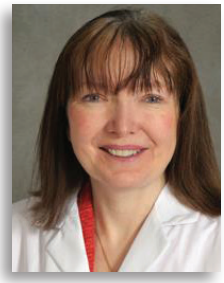
Emerging Treatment Landscape: Impact of Paradigm Shifts on Therapeutic Selection



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Treatment of multiple sclerosis (MS) involves a multidimensional approach. It includes symptom management, treatment of clinical attacks, disease modifying therapies (DMTs), institution of a wellness program, and identification and optimized management of any comorbidities. This talk covers seven areas that led to paradigm shifts in MS treatment and their impact.

The first area involves the enhanced understanding of MS pathophysiology. This includes current concepts on overt and hidden disease activity, and the lack of evidence for true remission. Mechanisms of neurodegeneration, which underlies progressive MS, are somewhat distinct from the focal inflammatory components of relapsing MS. Neuroinflammation can play a positive and negative role. B cells have been shown to have a potent effect on MS disease activity. Pathophysiology advances are helping to drive therapy development, and new treatment strategies.

The second area covers what was learned during the launch of the very first MS DMT in 1993. Such a launch involves unique opportunities that cannot be recaptured.

The third area reviews what has been learned in the era of multiple DMT options. Multiple options helped to crystallize the reasons to choose a given DMT, and the reasons to switch a DMT.

The fourth area involves therapy of very early MS, clinically isolated syndrome (CIS). CIS trials have documented the benefits of early vs. delayed treatment. With the identification of radiologically isolated syndrome, and a prodromal stage of MS, there is now debate about just how early therapy can or should be offered in the MS endophenotype spectrum. A recent meta-analyses suggested that age is a critical factor in how an individual responds to a DMT with regard to lessening risk of disability/progression. Therefore treating at a younger age becomes important.

The fifth area involves the era of oral DMTs. They offered an alternative to the needle injectables without compromising efficacy. They can play a role as initial DMTs, or switch DMTs.

The sixth area covers the high efficacy but higher risk monoclonal DMTs, that have focused the debate on aggressive vs. escalation DMT choices.

The final area covers the crystallization of DMT strategies that are increasingly accepted or under debate that are likely to emerge as treatment principles in the future.

In summary, current and emerging MS treatment strategies have been shaped by these selected therapeutic advances, which led to subsequent paradigm shift