In A Nutshell
August 2018

ABCs of DMTs

The currently approved disease-modifying treatments (DMT) are generally reliable in decreasing the number of relapses in patients with multiple sclerosis: however they have only limited efficacy in treating patients having more progressive disease courses. Of all the currently approved DMTs, only ocrelizumab is approved for patients with primary-progressive multiple sclerosis.

So, what is in the pipeline?

The goal of DMT for MS is to regulate your immune system. Different treatments approach this complex task in different ways. Among some potential new treatments, some seek to target immune cells (T and B cells) directly. Others affect the immune system components (S1P and tyrosine kiase) that control how and when those cells respond.

1. Lanquinimod-orally administered for patients with either relapsing-remitting or secondary-progressive. It appears that lanquinimod shifts the production of "bad" T-cells to "Good" T-cells.
2. Ozanimod - orally administered for patients with relapsing-remitting. In one trial the mean number of gadolinium (Gd) enhancing lesions and new/enlarging T2 lesions were significantly decreased with ozanimod compared to placebo.
3. Ponesimod is orally administered, selective S1P that is beng studied in patients with relapsing-remitting MS. In a phase II trial, the mean cumulative number of new T1 Gd-enhancing lesions were significantly reduced and the relaspse rates were lower with ponesimod 40 mg compared to placebo.
4. Siponimod is another orally administered, selective S1P being studied with relapsing-remitting and secondary progressive MS. In a phase III trial in patients with SPMS siponimod significantly reduced confirmed disability progression vs. placebo.
5. Ofatumumab is a subcutaneously –administered DMT being investigated in patients with relapsing-remitting MS. It works by depleting B-cells. Among other functions B-cells activate the T cells that cause damage to myelin.
6. Masitinib is an orally-adminsitered tyrosine kinase inhibitor that trargets mast cells and inhibits several biochemical processes. This DMT is being studied in both primary and secondary progressive MS.

MS Focus Magazine, Vol.20, Issue 3, Summer 2018
RX Update by Ellen Whipple, Pharm.D.

Just For Fun

The first 20 years of my living with MS (I was diagnosed in 1978) there were no therapies other than prednisone to control periods of relapse. In the mid-1990s the first DMT was Betaseron. Because there was such a huge demand for this first therapy you had to enter in a lottery to get it and hope your number came up quickly. Since that time I have tried 7 DMTs: Betaseron, Copaxone, Copaxone with Novantrone, Ampyra, Tysabri, Tecfidera, and now Ocrevus.

Has anyone anyone else tried 7 or more?

Injectable Medications .
Avonex®
Betaseron®
Copaxone®
Extavia®
GlatopaTM
Plegridy®
Rebif®
Zinbryta

Oral Medications .
Aubagio
Gilenya®
Tecfidera®

Infused Medications
Lemtrada®
Novantrone®
Ocrevus
Tysabri®

http://www.nationalmssociety.org/NationalMSSociety/media/MSNationalFiles/Brochures/Brochure-The-MS-Disease-Modifying-Medications.pdf