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Adverse Effects and Chronic Management of Multiple Sclerosis

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Commentary

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DESCRIPTION

The most prevalent demyelinating illness, known as Multiple Sclerosis (MS), causes damage to the insulating layers that protect nerve cells in the brain and spinal cord. This harm interferes with the nervous system's ability to transfer messages, leading to a variety of physical, mental, and occasionally psychiatric issues as signs and symptoms. Double vision, visual loss, muscle weakness, and issues with sensation or coordination are only a few examples of specific symptoms. Multiple Sclerosis (MS) can manifest in a variety of ways, with new symptoms either appearing suddenly (relapsing forms) or accumulating over time (progressive forms). Between attacks, symptoms in the relapsing types of MS may totally subside; nevertheless, some long-term neurological issues frequently persist, especially as the disease progresses. Interferon therapy for Clinically Isolated Syndrome (CIS) reduces the likelihood of developing clinical MS. It has been determined that the effectiveness of interferons and glatiramer acetate in children is essentially equal to that in adults. It's still unclear exactly what certain newer drugs, such fingolimod, teriflunomide, and dimethyl fumarate, do. Given the absence of trials directly comparing disease-modifying medicines or long-term patient monitoring, it can be challenging to draw clear conclusions about the optimum treatment, especially when it comes to the long-term effectiveness and safety of early treatment.

Since the majority of treatments have only been evaluated against placebo or a small number of other therapies, it is unknown how effective they are in comparison to one another. Direct comparisons of the effects of interferons and glatiramer acetate on relapse rate, disease progression, and MRI measurements show similar effects or only minor changes. Alemtuzumab, natalizumab, and fingolimod may be superior to other medications in the short term reduction of relapses in patients with RRMS. Interferon beta-1b (Betaseron), glatiramer acetate, and mitoxantrone may also prevent relapses. Natalizumab with interferon beta-1a (Rebif) may reduce relapses when compared to placebo and interferon beta-1a (Avonex). Uncertainty exists over the relative usefulness in slowing the advancement of disabilities. All drugs have side effects, which may change the risk to benefit ratios of certain treatments.

The disease-modifying therapies come with a number of side effects. For glatiramer acetate and interferons, one of the most frequent side effects is injection site irritation (up to 90% with subcutaneous injections and 33% with intramuscular injections). Over time, lipoatrophy, or the localized breakdown of fat tissue, may cause a noticeable dent to appear at the injection site. Interferons can cause flu-like symptoms, and some glatiramer users may experience a post-injection reaction that includes flushing, tightness in the chest, palpitations, and anxiety. This reaction typically lasts less than 30 minutes. Liver damage from interferons, systolic dysfunction (12%), infertility, and acute myeloid leukaemia (0.8%) from mitoxantrone, are more harmful but considerably less frequent. and natalizumab-induced progressive multifocal leukoencephalopathy, which affects 1 in 600 patients.

Macular edoema, raised liver enzymes, hypertension, slower heart rate, and a decrease in lymphocyte counts are all possible side effects of tingolimod. Tentative data suggests that teriflunomide is short-term safe, yet it can cause headaches, fatigue, nausea, hair loss, and limb discomfort as well as other side effects. It is harmful to foetal development and has been linked to instances of liver failure. Flushing and digestive issues are two of dimethyl fumarate's most frequent side effects. Despite the possibility that dimethyl fumarate will lower white blood cell counts, opportunistic infections were not observed during clinical studies.