

Medical Update Memo

August 19, 2010

Emerging Therapies in Relapsing-Relmitting Multiple Sclerosis

James J. Marriott* and Paul W. Q'Connor *Reviews on Recent Clinical Trials*, 2010, 5, 179-188.

Details

Disease modifying therapy (DMT) first became available for relapsing-relmitting multiple sclerosis (RRMS) fifteen years ago with the development of the moderately effective injectable agents interferon (IFN)- γ and glatiramer acetate (GA). The subsequent licensure of mitoxantrone (MX) and natalizumab (NZ) has allowed for better control of refractory disease at the expense of potentially life-threatening side effects in a minority of patients. This dichotomy between DMT potency and safety also characterizes the next generation of DMTs.

Five oral medications (fingolimod, cladribine, teriflunomide, laquinimod and fumarate) are at various stages of phase III clinical trials and it is anticipated that at least some of these will be on the market within the next year. The development of oral agents would be a tremendous advance with respect to convenience and it is anticipated that this would dramatically increase the number of patients on therapy. In parallel with oral therapies, powerful immunosuppressive monoclonal antibodies alemtuzumab, rituximab / ocrelizumab, daclizumab) are also being evaluated.

Enthusiasm for the next generation of therapies is tempered by safety concerns. Serious and occasionally fatal complications have occurred with the emerging monoclonal therapies and rigorous patient selection will be required for these agents. Moreover, some of the oral DMTs that are most eagerly awaited by patients have also been associated with serious side-effects in the trials to date. It is unclear how oral agents will be incorporated into future treatment algorithms given the need to weigh the ease of oral administration against the relative inconvenience but long-term safety of current first line injectable therapies.

National Research and Programs

Offert en français.