ADHERENCE TO FIRST-LINE IMMUNOMODULATORY DRUGS IN MULTIPLE SCLEROSIS

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Background: First-line immunomodulatory drugs (IMDs) used for the treatment of multiple sclerosis (MS) include the beta-interferons and glatiramer acetate. If patients are unable to comply with therapy, then potential gains from treatment will not be optimized. Objectives: 1) Characterize duration of uninterrupted use of a) the initial IMD, and b) all first-line IMDs combined; 2) examine baseline predictors of adherence: sex, age, baseline disability, disease duration, and IMD type; and 3) determine whether adherence changed over time. Methods: This was a retrospective analysis of 2051 MS patients prescribed an IMD in British Columbia, Canada, from 1995 to 2009. Time to cessation of drug was determined using survival analysis; potential baseline predictors of adherence (sex, age, disease duration, and baseline disability as measured by Expanded Disability Status Scale [EDSS] score) were examined via univariate (Kaplan-Meier) and multivariable (Cox proportional hazards) models. Results: Patients adhered to their initial first-line IMD for a median of 4.2 years (95% confidence interval [CI], 3.8-4.7), and to any first-line IMD for a median of 6.9 years (95% CI, 6.4-7.4) before ceasing IMD therapy, taking a break from therapy for greater than 3 months, or switching to a second-line therapy. However, one-quarter of patients stopped their initial IMD within 1.2 years (95% CI, 1.1-1.4) and any first-line IMD within 2.2 years (95% CI, 1.9-2.4). Factors associated with poor adherence included greater disability (higher EDSS score) and younger age. Conclusions: Given the chronic nature of MS, long-term adherence to IMDs in MS is likely suboptimal for many patients. The reasons why younger patients, who may have the most to gain from IMD treatment, were the least adherent require further investigation.

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