(S55) ADHERENCE TO DISEASE-MODIFYING THERAPIES IN MULTIPLE SCLEROSIS
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Background: Disease-modifying therapies (DMTs) slow the progression of relapsing-remitting multiple sclerosis (MS). DMT adherence is important in the clinical management of MS. Objectives: Compare adherence and persistence in MS patients initiated on intramuscular (IM) interferon beta-1a (IFNβ-1a), subcutaneous (SC) IFNβ-1a, interferon beta-1b (IFNβ-1b), and glatiramer acetate (GA). Methods: This retrospective medical and pharmacy claims analysis used data from a large commercial US health plan. Subjects were adults with MS starting first-line IM IFNβ-1a, SC IFNβ-1a, GA, or IFNβ-1b from 1/1/2000 to 9/30/2008. The first DMT claim was the index date; patients were observed for 6 months pre-index and 12 to 36 months post-index. Adherence was measured with a medication possession ratio (MPR): [days of DMT/days until earlier of DMT switch or end of post-index period]; patients with an MPR ≥0.80 were “adherent.” Persistence was the number of days until the earlier of a minimum 60-day therapy gap or the last DMT claim. Adherence was analyzed with logistic regression; persistence was analyzed with Cox proportional hazards regression. Regressions controlled for DMT (reference: IM IFNβ-1a), age, gender, pre-index Charlson comorbidity score, and pre-index MS-related inpatient stay and emergency visit. Results: The study population comprised 6680 first-line patients: 2305 (34.5%) on IM IFNβ-1a, 894 (13.4%) on IFNβ-1b, 2270 (34.0%) on GA, and 1211 (18.1%) on SC IFNβ-1a. Patients were 42.2 (±10.1) years old, on average (±SD), and 77.4% female. Unadjusted proportions of adherent patients were 62.3% for IM IFNβ-1a, 52.2% for IFNβ-1b, 55.4% for GA, and 58.5% for SC IFNβ-1a (overall P < .05). In regression-adjusted results, patients on IFNβ-1b, GA, and SC IFNβ-1a were significantly less likely to be adherent compared with those on IM IFNβ-1a: odds ratios (95% confidence intervals) were as follows: IFNβ-1b, 0.66 (0.56-0.77); GA, 0.75 (0.67-0.84); SC IFNβ-1a, 0.85 (0.74-0.98). SC IFNβ-1a patients were 12% more likely to stop therapy during the post-index period than were IM IFNβ-1a patients (hazard ratio, 1.12 [1.01-1.23]). Conclusions: Patients on first-line IM IFNβ-1a therapy were more likely to be adherent than those on other DMTs and had more persistence than those on SC IFNβ-1a.

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