

ADHERENCE TO PARENTERAL FIRST-LINE DISEASE-MODIFYING THERAPY FOR MULTIPLE SCLEROSIS

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1 BACKGROUND

Several first-line disease-modifying therapies (DMTs) have shown significant benefit in preventing relapses and slowing disease progression among multiple sclerosis (MS) patients. Lower adherence may be associated with lower efficacy and thus with higher risk of relapse. Adherence to DMTs was also associated with lower likelihood of hospitalization, relapse, and lower medical costs.

2 PURPOSE

The objective of this study was to analyze adherence to parenteral first-line treatments in MS patients and related factors.

3 METHODS

Observational, retrospective and longitudinal study.

- Inclusion criteria:**
- ✓ MS adult patients (≤18 years).
 - ✓ First-line treatments (IM IFN-beta-1-a, SC IFN-beta 1-a, SC INF-beta 1-b and glatiramer acetate).
 - ✓ Study period: 1st September 2005 to 31st August 2015.

- Compared characteristics:**
- ✓ Demographics (gender, age).
 - ✓ Administration route.
 - ✓ Treatment.

DMT adherence

$$MPR = \frac{\text{Number of days with DMT medication}}{\text{Days of study period}}$$

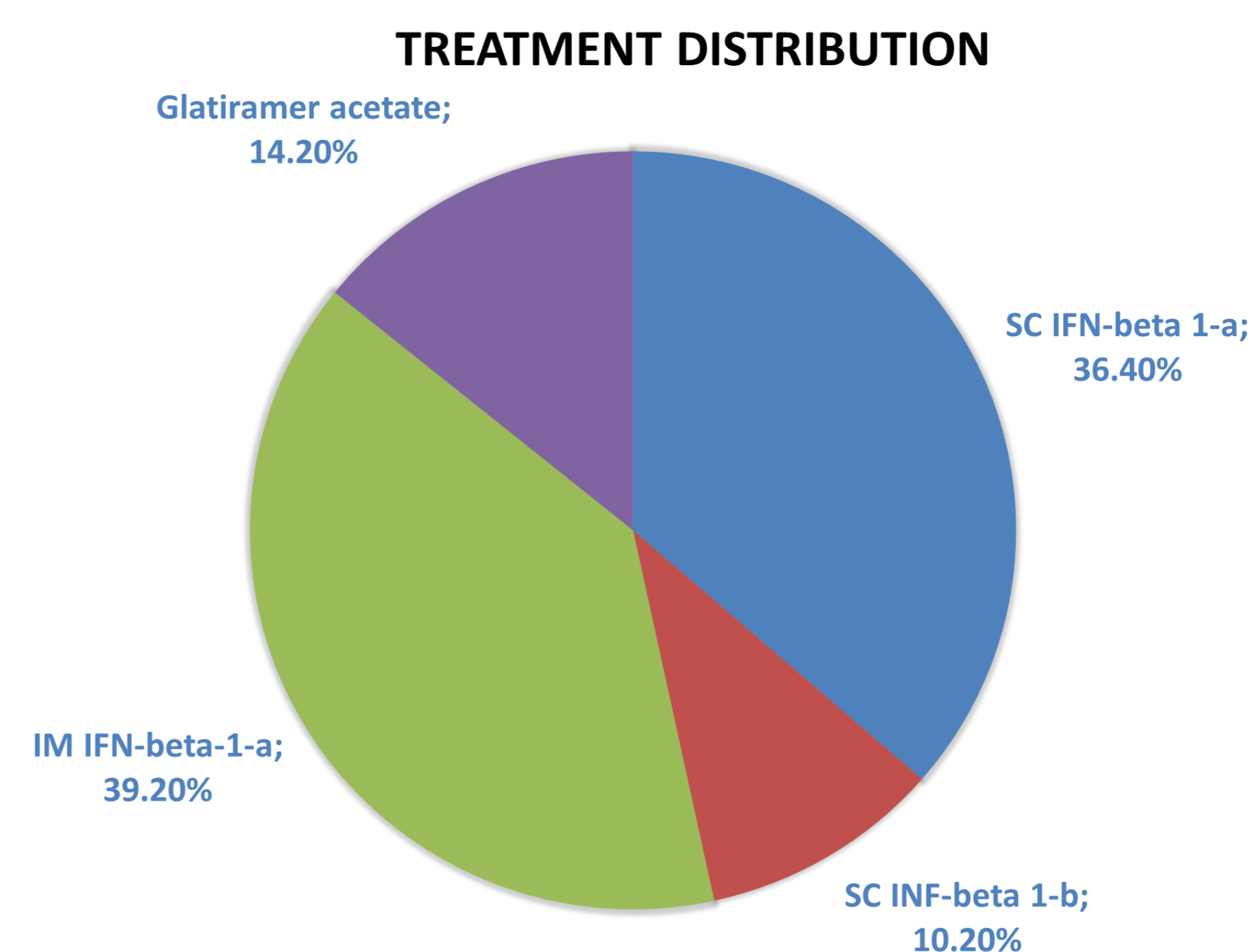
Max. value= 100%
If MPR >90% —————> adherent patient

Data were collected from Pharmacy Department electronic record.

Categorical variables were compared using Chi-squared or Fisher's exact tests; continuous variables were compared using non-parametric Wilcoxon rank-sum test. One-way analysis of variance (ANOVA) was performed to explore treatment influence. A logistic regression model was used to estimate the risk-adjusted rate of non adherence.

4 RESULTS

Number of patients	176	
Sex	67.6% females	32.4% males
Mean age (±SD)	36.27± 11 years	
% Adherence	84,1%	
Mean(±SD) adherence	93.6%±16.5%.	



No difference was observed regarding gender (OR=1.2 CI95%= 0.5-2.8; p= 0.85) and route of administration (OR= 0.7 CI95%= 0.3-1.6; p= 0.533).

Adherent patients were older (mean age difference=2.2 years CI95%= 9.4-0.6; p=0.04).

In multivariate analysis **age was the only associated variable** (OR= 1.05 CI95%= 1.01-1.10; p=0.02).

No difference was observed between treatments in ANOVA analysis (p=0.52).

5 CONCLUSIONS

First-line adherence was high among MS treated patients although nearly one sixth of patients were non adherent. Younger patients were more likely to be non adherent.

Conflict of interest: nothing to disclose

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