Risk Perception in Multiple Sclerosis: Reasons for Switching Treatment Between High Efficacy and Non-high Efficacy Disease-modifying Therapies

Gustavo Seifer[1], Patricia Dominguez-Castro[2], James Pike[3], Eddie Jones[3], Rainel Sanchez-de la Rosa[1]
[1]Novartis Pharma AG, Basel, Switzerland, [2]Novartis Global Service Center, Dublin, Ireland, [3]Adelphi Real World, Manchester, UK

Objective:
To investigate the influence of risk perception on physicians when switching treatments for multiple sclerosis (MS) and the reasons for switching when prescribing high-efficacy treatments (HETs) or non-HETs.

Background:
Disease-modifying therapies (DMTs), approved for MS, have variable benefit-risk profiles. Previous studies have shown that the decision for prescribing a non-HET or a HET can be strongly influenced by an individual's risk perception, with HETs potentially being perceived by physicians as having greater safety concerns (malignancies/infections) than non-HETs.

Design/Methods:
Data were drawn from the Adelphi Real-World MS Disease-Specific Program, a retrospective non-interventional cross-sectional, multi-cohort study. Analysis was conducted on RMS patients identified between 2017-2021, with both current and immediately prior treatment. Descriptive statistics (n, %) and Fisher's Exact test were used to compare risk perception (malignancies/infections), and reasons for influencing treatment switches.

Results:
A total of 4129 patients were included in the study; of those, 3538 switched from non-HET and 591 from HETs. Overall, very few patients switched treatment for risk of malignancies/infections versus those switched for no risk of malignancies/infections (0.9% vs. 99.1%). The primary reason for switching was lack of efficacy (non-HET vs. HET: 53.3% vs. 35.9%; $p<0.0001$) including relapse frequency (26.8% vs.15.2%; $p<0.0001$), increased number of lesions (20.3% vs.12.4%; $p<0.0001$) and relapse severity (18.6% vs.14.7%; $p=0.0241$). Other reasons for switching included patient request (20.6% vs. 9.5%; $p<0.0001$), injection-site reactions (16.2% vs. 0.3%; $p<0.0001$) and patient compliance issues (12.1% vs. 2.5%; $p<0.0001$).

Conclusions:
These results indicate that physicians' risk perception of malignancies and infection is not a leading factor when switching from HETs or non-HETs. Lack of efficacy, including relapse frequency, increased lesions, relapse severity and patient request are the main-factors influencing treatment switching, especially in the case of non-HETs. These findings support early initiation of HET in treating MS and underscores the need for evaluation of the current approach of escalation therapy.