DMT44

Patient Experience on Diroximel Fumarate (DRF) from the MyMSTeam Social Network: Considerations for DMT Selection

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OBJECTIVE

To evaluate patient reported outcomes for patients with MS currently taking DRF (Vumerity®) including benefits, tolerability, and mitigation strategies. Awareness, interest, and barriers to considering DRF were also evaluated.

CONCLUSIONS

- HCP recommendation for which DMT a patient takes is an important consideration when starting therapy. However, the decision to remain on a treatment is determined by efficacy and tolerability.
- The majority of patients on DRF started treatment with a 1-week dose titration; however, there was a high proportion of patients who had switched from prior DMF, which may partially explain the lower utilization of extended titration regimens.
- A variety of different dietary practices were observed in patients taking DRF; 57% took DRF with a meal, while 43% did not. In those who did take DRF with a meal, about half took with a lower calorie meal, while the others took with a mix of high and/or low-calorie meals.
- Early real-world patient reported data suggest that DRF is well tolerated and the majority of DRF patients reported experiencing physical benefits.
- The data demonstrating improvement in physical benefits and quality of life should be interpreted with caution due to the subjective nature of the survey responses.

INTRODUCTION

Diroximel fumarate (DRF) is a next-generation oral fumarate approved in the United States and Europe for patients with relapsing forms of multiple sclerosis (RRMS). DRF has the same pharmacologically active metabolite as dimethyl fumarate (DMF) and has a similar efficacy and safety profile.[1,2]

- DRF has demonstrated favorable gastrointestinal (GI) tolerability in two phase 3 clinical studies with RRMS patients, including a head-to-head randomized study of DRF vs DMF.[3,4]
- Clinical and real-world studies have shown low GI-related treatment discontinuation and high rates of treatment adherence in DRF-treated RRMS patients.[4,5]
- There is limited data examining patient perceptions of DRF treatment. Patient satisfaction with their disease modifying treatment (DMT) leads to im proved patient adherence and optimal treatment outcomes.[6] Our aim was to evaluate patient reported outcomes for RRMS patients currently taking DRF.

METHODS

- MyMSTeam is an online social network of over 184,000 patients diagnosed with MS of which 76% are based in the United States. MyMSTeam helps build awareness and understanding of how people living with MS manage their condition.[7]
- A web-based, voluntary, anonymous survey was conducted of users of MyMSTeam in January 2022. Respondents were US residents ≥21 years of age with a diagnosis of MS.
- All data included are results of patient responses to closed-end survey questions. Survey questions were developed based on member-driven discussions/language happening on MyMSTeam.
- Survey questions included demographic information, disease and DMT history including if currently taking DRF, and self-assessments of physical functioning, emotional well-being, and tolerability of side effects. DRF-treated patients were also asked about their meal habits with medication schedule.

RESULTS

- Patients: 535 respondents completed the survey which was live from December 2021 to January 2022. 46 (8.6%) were receiving DRF, 77 (14%) were receiving DMF, 155 (29%) had previously received DMF, and 82 (15%) were receiving other (non-DMF/DRF) oral DMTs. Of the 46 DRF patients, 15% took DRF as first-line therapy. Prior DMT use included DMF (65%), glatiramer acetate (30%), interferon beta-1a (20%), fingolimod (7%) and ocrelizumab (7%). Baseline characteristics are shown in Table 1.
- 33% of patients were on DRF for 1 year while 65% of patients had received DRF less than 1 year. Majority of patients on DRF (65%) started treatment with a 1-week dose titration. This may be explained by the high proportion of patients who switched to DRF from prior DMF, since patients who were already receiving DMF may be less likely to require an extended titration period.
- 41 off the 77 DMF-treated patients (53%) were aware of DRF. Awareness was primarily driven by online sources. 1 in 3 current DMF patients (33%) were likely to ask their HCPs about DRF. Important considerations among current DMF users in asking their HCPs about DRF include if their insurance plan covered it (53%), if their current DMT stops working (49%) and if their HCP encourages them to switch to DRF (48%; Figure 1).
- Most common reasons for initiating DRF were health care provider's (HCP) recommendation (72%) and preference for an oral treatment (41%; Figure 2). Fewer GI issues was a driver for 1 in 5 DRF patients to start treatment.
- 70% of patients on DRF reported physical benefits despite an average treatment duration of less than 1 year. Physical benefits reported for DRF include slowed disease progression (39%), decreased relapses (30%), and prevention of new symptoms (24%; Figure 3).
- 46% of DRF-treated patients reported experiencing emotional/quality of life benefit. Emotional benefits reported included improved quality of life overall (17%), improved cognitive functioning (17%) and improved energy level (15%; Figure 4).
- 54% of DRF-treated patients reported not experiencing GI issues (Figure 5a). For DRF patients that experienced GI issues in the past, GI issues resolved for about half of them.
- 83% of DRF patients reported that side effects were very/somewhat tolerable (Figure 5b).
- 57% of DRF-treated patients took DRF doses with a meal and 43% did not take their doses with food. (Table 2) 54% took DRF with lower calorie meal (<700 calories). Overall, there does not appear to be one predominant dietary practice or food-related regimen that patients follow when taking DRF.

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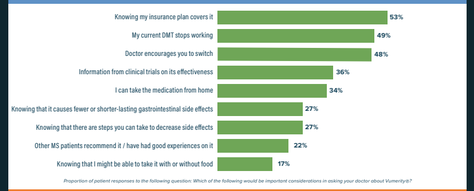
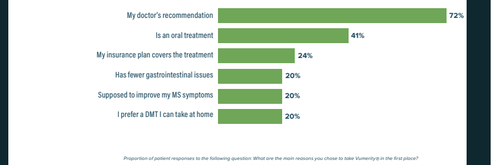
FIGURE 1. Important Patient Considerations in Asking Their HCPs About DRF



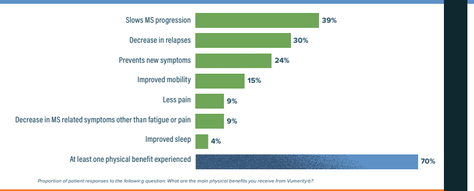
Proportion of patient responses to the following question: Which of the following would be important considerations in asking your doctor about Vumerity?

FIGURE 2. Top Patient-Indicated Drivers for Starting DRF Treatment



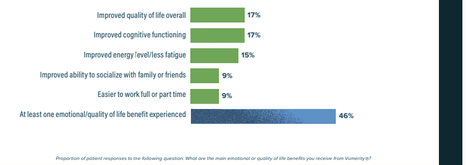
Proportion of patient responses to the following question: What are the main reasons you chose to take Vumerity® in the first place?

FIGURE 3. Patient-Reported Physical Benefits of DRF Treatment



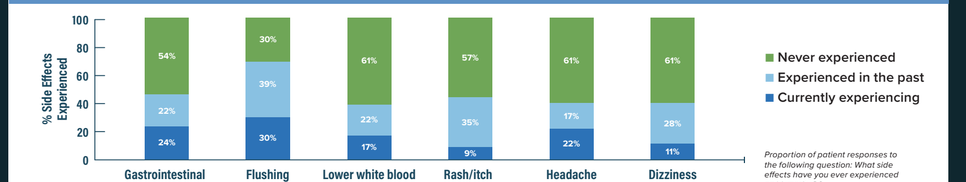
Proportion of patient responses to the following question: What are the main physical benefits you receive from Vumerity?

FIGURE 4. Patient-Reported Emotional Benefits of DRF Treatment



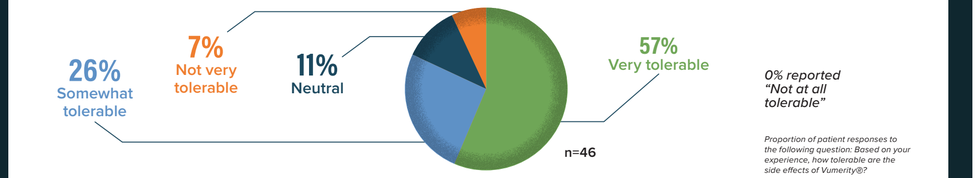
Proportion of patient responses to the following question: What are the main emotional or quality of life benefits you receive from Vumerity?

FIGURE 5A. Patient-Reported Side Effects Experienced on DRF Treatment



Proportion of patient responses to the following question: What side effects have you ever experienced on Vumerity®?

FIGURE 5B. Patient-Reported Side Effects Tolerability



0% reported "Not at all tolerable"

Proportion of patient responses to the following question: Based on your experience, how tolerable are the side effects of Vumerity®?

TABLE 1. Demographic and Disease Characteristics of Patients Treated With DRF

GENDER	
Female	39 (85%)
Male	7 (15%)
AGE, N (%)	
<40	3 (7%)
40-49	16 (35%)
50-59	13 (28%)
60-69	11 (24%)
70+	3 (7%)
RACE & ETHNICITY, N (%)	
Caucasian	37 (80%)
Black/African American	7 (15%)
Hispanic/Latino	2 (4%)
CURRENT MS DIAGNOSIS, N (%)	
RRMS	38 (83%)
SPMS	4 (9%)
Other/Not Sure	4 (9%)
DURATION ON CURRENT TREATMENT, N (%)	
Less than 1 year	30 (65%)
1 year	15 (33%)
2 or more years	1 (2%)
EMPLOYMENT STATUS, N (%)	
Working (full and part time)	21 (46%)
Unable to Work	11 (24%)
Unemployed	4 (9%)
Retired	9 (20%)
Prefer not to answer	1 (2%)

Percentages shown in Table 1 are rounded to the nearest percentage point

TABLE 2. DRF Doses and Meal Habits

MEAL HABITS WITH DRF DOSE SCHEDULE, N=46 (%)	
Prior to starting meal	7 (15%)
During meal	2 (4%)
Right after meal finished	12 (26%)
With a snack	5 (11%)
Don't take it with food	20 (43%)
AVERAGE CALORIE INTAKE , N=26 (%)	
Higher calorie meal (700+ calories)	1 (4%)
Lower calorie meal (<700 calories)	14 (54%)
A mix of both (lower/higher calories)	9 (35%)
Not sure	2 (8%)
TYPES OF FOODS , N=26 (%)	
Lower fat foods	11 (42%)
Higher fat foods	1 (4%)
A mix of both	12 (46%)
Not sure	2 (8%)

Percentages shown in Table 2 are rounded to the nearest percentage point

References:
1. Vumerity [prescribing information]. Cambridge, MA: Biogen; 2022. 2. Tecfidera [prescribing information]. Cambridge, MA: Biogen; 2022. 3. Naismith RT, et al. *CNS Drugs.* 2020;34(2):185-196. 4. Naismith RT, et al. *Mult Scler.* 2020;26(13):1729-1739. 5. Liseno J et al. *Neurol Ther.* 2021. 6. Washington F and Langdon D. *J Neurol.* 2022;269(4):1861-1872. 7. What is MyMSTeam? Available at: https://www.mymsteam.com/about.

Disclosures:
MG: consultant and non-CME services for TG Therapeutics, Biogen, Novartis, and Sanofi-Genzyme; speaker bureau for Sanofi-Genzyme; CR: consultant for Bristol Myers Squibb, Novartis, Biogen, EMD and TG Therapeutics; speaker bureaus for Alexion, Biogen, Bristol Myers Squibb, TG Therapeutics, and Novartis; DRB: consultant for Biogen, Novartis, Genentech, Horizon, TG Therapeutics, Sanofi-Genzyme, Bristol Myers Squibb and Greenwich; KB, BS and BL: employees of MyHealthTeam, which was compensated for conducting the research; JPM, JBL, and SLS: employees of and hold stock options in Biogen; SK and MZ: employees of Biogen at the time of this study.

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