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Comparative effectiveness of teriflunomide vs dimethyl fumarate in multiple sclerosis

David-Axel Laplaud, MD, PhD, Romain Casey, PhD, Laetitia Barbin, PhD, et al., on behalf of the SFSEP and OFSEP groups

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Correspondence
Dr. Laplaud
david.laplaud@univ-nantes.fr

Study objective and summary result

This study compared teriflunomide and dimethyl fumarate (DMF) in terms of effectiveness for patients with relapsing-remitting multiple sclerosis (RRMS) in a multicenter French cohort, and it found that teriflunomide and DMF are similar in terms of clinical effectiveness for patients with RRMS.

Classification of evidence

Class III.

What is known and what this paper adds

Teriflunomide and DMF both reduce annualized relapse rates and disability accumulation in patients with RRMS, but no investigation has directly compared them. This investigation shows that they are similar in terms of clinical effectiveness.

Participants and setting

The investigators analyzed data from adults with RRMS who were members of the Observatoire Français de la Sclérose En Plaques cohort (NCT02889965), which was mostly conducted through 34 centers in France. The selected patients began receiving teriflunomide (n = 713) or DMF (n = 1,057) between May 2014 and January 2016 and had Expanded Disability Status Scale (EDSS) scores ≤5.5 at treatment initiation. The data for these analyses were accessed on December 15, 2017.

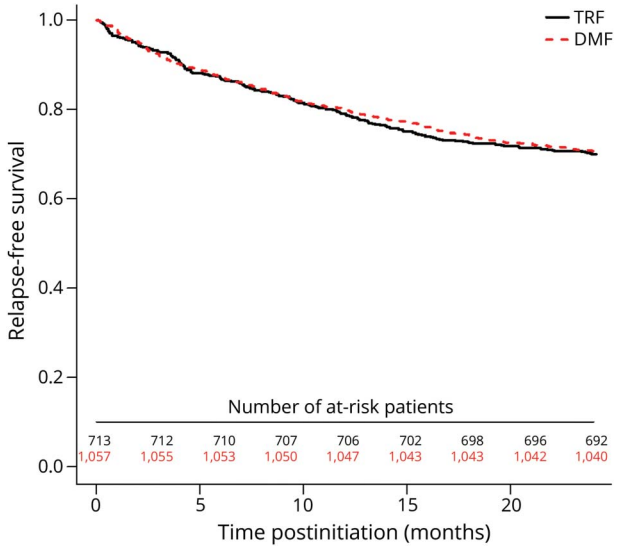
Design, size, and duration

The main outcomes of interest were relapses within 1 or 2 years of treatment initiation. The investigators also examined from-baseline EDSS score changes within 1 or 2 years of treatment initiation. Logistic regression models were used to compare the outcomes for the teriflunomide-treated and DMF-treated patients, and propensity scores were used to address potential confounders.

Main results and the role of chance

The teriflunomide-treated and DMF-treated groups were similar in terms of 1-year relapse rates (19.4% vs 21.6%, respectively; $p = 0.22$) and 2-year relapse rates (28.1% vs 30.9%, respectively; $p = 0.19$). No between-group differences in from-baseline EDSS score changes were observed.

Figure Time to first relapses in the teriflunomide-treated and DMF-treated groups



Bias, confounding, and other reasons for caution

This investigation lacked complete data for all patients. Treatments were not randomly assigned.

Generalizability to other populations

The reliance on data from France may limit the international generalizability of the results.

Study funding/potential competing interests

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