Longterm immunomodulatory therapy in 4.938 outpatients with relapsing-remitting Multiple Sclerosis (RRMS) under special consideration of switching to oral DMDs

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Background

NeuroTransData, a German neurologists` network of 75 doctor`s offices, is using a MS database (n = 18 608 MS patients) to collect “real world” data for an observation period of 8 years.

Objectives

To analyze the reasons for switching therapy and the clinical course of RRMS patients with disease-modifying drugs (DMDs) during the observation period.

Methods

Application of specific inclusion criteria (disease duration > 7 years; treatment > 2 years with injectable DMDs (Avonex^{R}, Rebif^{R}, Betaferon^{R} / Extavia^{R}, Copaxone^{R}) led to the identification of 4 938 eligible patients with RRMS (female n=3 675; (74.4%) / male n=1 263 (25.6%)). Those patients, who switched to oral DMDs during the observation period, were further analyzed with special interest in the reasons for switching therapy and their clinical course (EDSS) following the switch.

Results

In total, 1 520 (30.8%) of the 4 938 eligible RRMS patients were switched to oral DMDs, among them 580 (38%) to Dimethylfumarat, 717 (47%) to Fingolimod and 223 (15%) to Teriflunomid.

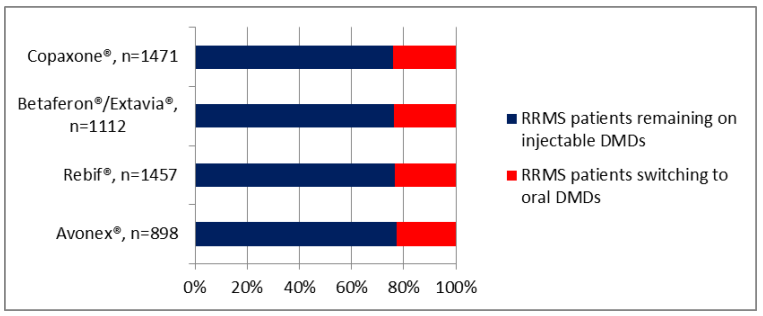

Figure 1: RRMS patients remaining on injectable DMDs respectively switching to oral DMDs in percent in the different therapeutic groups.

The percentage of and baseline characteristics of RRMS patients switching from injectable to oral DMDs were comparable between the different therapeutic groups (see figure 1 and table 1).

	Avonex® n=266	Rebif® n=441	Betaferon® Extavia®, n=346	Copaxone® n=467
gender (f / m)	75%/25%	71%/29%	73.7%/26.3%	77.7%/22.3%
age (y)	39.4	40.3	42.2	43
disease duration (y)	7.7	7.3	7.4	8.1
treatment period (y)	2.1	2.7	2.5	2.8
EDSS before switch	2.0	2.0	2.0	2.0

Table 1: Baseline characteristics of RRMS patients switching from different injectable to oral DMDs. f:female; m:male; age/disease duration/treatment period on average in years; EDSS: median on the Expanded disability status scale.

The main reasons for switching from injectable to oral DMDs were insufficient therapeutic effect (n=502, 33%), followed by patient’s wish (n=293, 19%) and side effects (n=102, 7%), the latter encompassing flue-like symptoms and fear of injections (see figure 2).

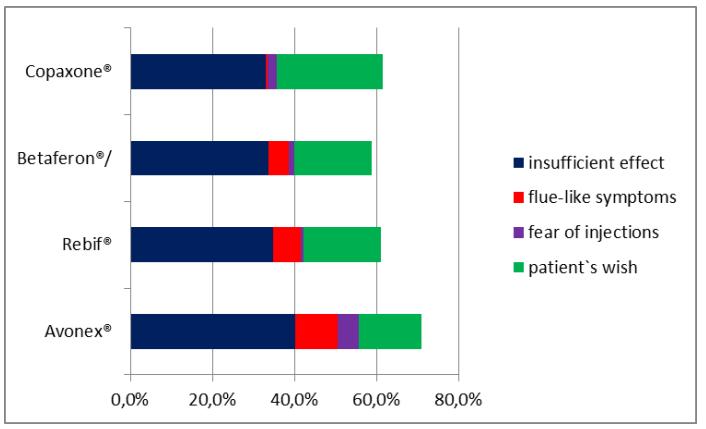

Figure 2: Main reasons in percent for switching from injectable to oral DMDs among different therapeutic groups, others not specified.

Within another 3 months on average, 177 (12%) of the patients having already switched to oral DMDs, were switched once again to another disease-modifying therapy (another oral or injectable DMD or monoclonal antibodies), whereas 1 274 patients (84%) remained on their current therapy. The main reasons for the second switch were side effects (62.1%) followed by insufficient therapeutic effect (15,6%) and patient`s wish (9%) (see figure 3).

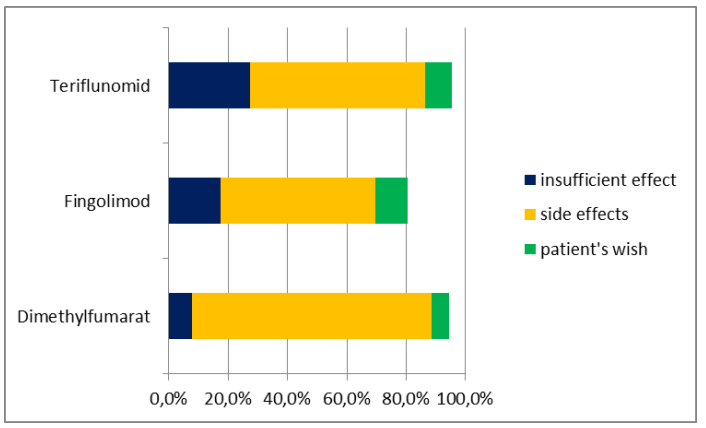

Figure 3: Main reasons in percent for second switch from oral DMDs to another disease-modifying therapy, others not specified.

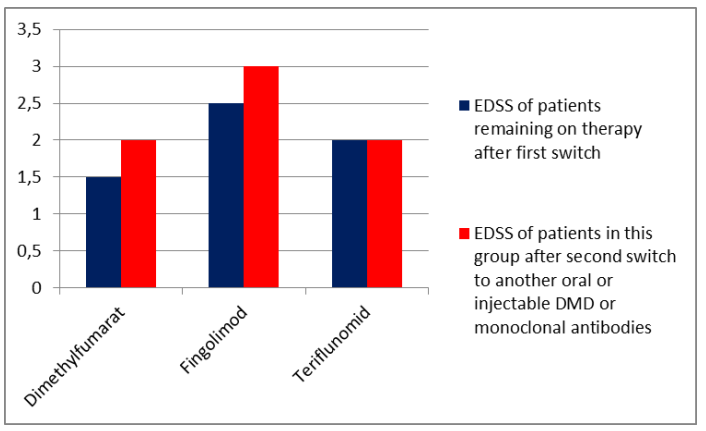

Figure 4: Last EDSS (median) in observation period of RRMS patients remaining on therapy after first switch respectively after second switch from orals DMD to another disease-modifying therapy.

Conclusions

The main reason for switching from injectable to oral DMDs was lack of therapeutic efficacy (optimization of therapy), followed by patient’s wish and unfavourable side effects.

In those patients who switched a second time, side effects were primary, followed by insufficient effect and patient`s wish.

Most of the patients (84%) switching to oral DMDs remained on that therapy during the entire observation period.

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