A One-Year Analysis of Fingolimod Utilization Patterns in Multiple Sclerosis (MS) Treatment

Pamela H. Koerner, BS, PharmD, BCPS1, Kathleen Love, RN2
Richard T. Miller, RPh, MBA2

1: Duquesne University School of Pharmacy; 2: Walgreens Co.

BACKGROUND

Multiple Sclerosis (MS) is an autoimmune disease that affects the body's myelin, a protective substance on nerve cells that supports electrical impulses within the nervous system. MS is a debilitating disease that currently affects the lives of roughly 400,000 Americans and over 2.5 million people worldwide.

The etiology of MS is unknown; however, studies have shown that there is a direct correlation between the incidence of MS and geographic location. Those who live in the western hemisphere and temperate latitudes have been shown to have the greatest rate of occurrence. Other risk factors include a family history of MS, gender and other environmental factors.

RESULTS CONTINUED

Figure 2: Reported MS type

- Relapsing: 25%
- Remitting: 3%
- Primary Progressive: 68%
- Progressive Relapsing: 2%
- Secondary Progressive: 2%
- Unknown: 3%

Figure 3: Historical MS treatment

- Switched from Injection Therapy to Fingolimod: 7%
- Treatment: 2%
- Naive: 90%

Figure 4: Time since diagnosis

- 0 - 6 mon: 21%
- 7 - 11 mon: 24%
- 1 - 5 yrs: 32%
- 6 - 10 yrs: 12%
- 10 years +: 2%
- Undocumented: 2%

Figure 5: Adverse events while on fingolimod

- Headache: 12%
- Depression: 14%
- Fatigue-like symptoms: 13%
- Infection: 6%
- Gastrointestinal: 6%
- Other: 1%

Figure 6: Number of injectable and/or infusion medications utilized prior to fingolimod therapy

- 1 injectable: 12%
- 2 injectables: 2%
- 3 injectables: 24%
- 4 injectables: 6%
- Undocumented: 52%

RESULTS CONTINUED

Figure 7: Injectable/Infusion medications utilized prior to fingolimod

- Interferon beta-1a: 5%
- Interferon beta-1b: 2%
- Glatiramer: 2%
- Mitoxantrone: 3%
- Natalizumab: 9%

Table 1: Medication Possession Ratio (MPR)

<table>
<thead>
<tr>
<th>Medication</th>
<th>Patient Count (N)</th>
<th>Medication Possession Ratio (MPR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fingolimod</td>
<td>1,371</td>
<td>94%</td>
</tr>
<tr>
<td>All MS medications*</td>
<td>16,463</td>
<td>94%</td>
</tr>
</tbody>
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* MPR calculation excludes mitoxantrone and natalizumab. Only WVP Central managed patients included (excludes self-med)

CONCLUSION

Based on the utilization data, 1,471 patients were retrospectively reviewed. 54 patients were excluded. Of 1,417 patients, 77% of the study population received all medications prescribed. Most patients (94%) were managed with injectable medications. The majority received fingolimod as their initial therapy. Adverse events were reported as headaches, fatigue-like symptoms, gastrointestinal effects, bruising, and bleeding. Melanoma was reported as an identified adverse event reported (5.1%). 94% of patients adverse effects were reported as "other".

75.1% of all study patients were treated with injection therapy before being switched to fingolimod (Fig. 4). More than half (50.8%) of patients switched from injection therapy to fingolimod therapy with no prior treatment. Mixed doses were also collected from the follow-up assessment. Patients who reported mixed doses while on fingolimod therapy accounted for 9% of the total population. Of these patients, the majority reported only missing one dose since starting fingolimod therapy when asked out of a range of 1 dose to 5 more doses. In addition, 9.77% unique patients reported having a physician confirmed relapse while on therapy.

MPR for the fingolimod patients was 94% for those centrally managed through Walgreens Pharmacy Table (1). This was comparable to the MPR for other MS managed patients. MPR was based on month refill data.

Limitations of the study included the utilization of self-reported data. Undocumented data was due to patients who could not recall MS type and adverse effects at the time the initial and follow up assessment was given.

REFERENCES