INTRODUCTION

Tardive dyskinesia (TD), a persistent and potentially disabling movement disorder, can emerge with prolonged exposure to antipsychotics or other dopamine receptor blocking agents.

Valbenazine is a highly selective vesicular monoamine transporter 2 (VMAT2) inhibitor approved for the treatment of TD in adults.

The protocol-defined scoring methods have been used in contemporary TD studies, the primary efficacy outcome is usually based on changes from baseline in the Abnormal Involuntary Movement Scale (AIMS) total score (sum of AIMS items 1-7).

However, a low AIMS total score can be ambiguous when presented without context; for example, a total score of 4 could represent any of the following:

- Rating of 4 (severe) in one different body region
- Rating of 3 (moderate) in two different body regions
- Rating of 2 (mild) in four different body regions
- Rating of 1 (minimal) in one different body region
- Rating of 0 (none) in a single region

Physicians often use (knowingly or unknowingly) informal assessments to gauge TD severity in their patients (e.g., mild, moderate, or severe).

Therefore, data from a long-term valbenazine study, KINET4 (NCT02405091), were analyzed post hoc to evaluate the potential of AIMS item 8 (clinician’s global impression of severity) as a simple clinical measure that could be used in lieu of the AIMS total score.

METHODS

STUDY DESIGN

KINET4 included a 48-week open-label treatment period and a 4-week drug-free safety follow-up period (total of 52 weeks) (Figure 1).

RESULTS

In general, results were similar between the protocol-based scoring and the post hoc-based scoring methods.

In all participants (N=143), mean scores for AIMS item 8 and changes from baseline (±SD) were as follows:

- At baseline: protocol, 3.2 ± 0.6; post hoc, 3.3 ± 0.6 (moderate-to-severe)
- At Week 48: protocol, 1.2 ± 0.7; post hoc, 1.4 ± 0.7 (minimal-to-mild)

Most participants had a clinically meaningful improvement at Week 48 (end of treatment).

CONCLUSIONS

Once-daily valbenazine treatment resulted in improved AIMS item 8 scores (clinician’s global impression of severity) in patients with TD.

Shift analyses indicated that most participants had a clinically meaningful improvement at Week 48 (end of treatment).

More than one AIMS item 8 scores were based on report by the rater (protocol-based method) or the highest items 7 scores (post hoc method).

The results demonstrate that AIMS item 8 scores may be an appropriate clinical measure for assessing TD severity and the conversion of AIMS item 8 score from protocol-based to post hoc-based can simplify communication and can yield clinically useful and actionable data.

REFERENCES


Figure 1. Study Design

Figure 2. AIMS Mean Change from Baseline

Figure 3. Participants Meeting Shift Criteria

Table 1. AIMS Scoring and Descriptors in KINET4

<table>
<thead>
<tr>
<th>Score</th>
<th>Protocol-Defined Descriptors</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No dyskinesia</td>
</tr>
<tr>
<td>1</td>
<td>Minimal or slight dyskinesia: Low amplitude, present during some but not most of exam</td>
</tr>
<tr>
<td>2</td>
<td>Mild dyskinesia: Low amplitude and present during most of exam (or moderate amplitude and present during some exam)</td>
</tr>
<tr>
<td>3</td>
<td>Moderate dyskinesia: Moderate amplitude and present during most of exam</td>
</tr>
<tr>
<td>4</td>
<td>Severe dyskinesia: Maximal amplitude and present during most of exam</td>
</tr>
</tbody>
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Table 2. Results from AIMS Item 8 shift analyses were similar between the scoring methods (Figure 3):

- In participants with a score of 4 at baseline (severe), 100% shifted to a score ≤3 at Week 48 (none to moderate)