Cervical Dystonia Subtypes
Baseline Results From the Cervical Dystonia Patient Registry for Observation of OnabotulinumtoxinA Efficacy (CD PROBE)

P. David Charlton,1 Mark Story,2 Joseph Jankovic,3 Merc Schwab,4 Mitchell Blevins,5 Spyridon Pappas5

1National Institutes of Health, Bethesda, MD; 2University of Alabama, Birmingham, AL; 3Mayo Clinic, Rochester, MN; 4University of California, San Francisco, CA; 5Allergan, Inc, Irvine, CA

To describe patient, disease, and treatment characteristics associated with predominant head and neck postures in subjects with cervical dystonia (CD).

CD presents with variable head and neck postures as well as movements (dystonic tremor). Most clinical studies preferentially include subjects with presentations of predominant torticollis or anterocollis. In order to better understand why subjects with predominant retrocollis and anterocollis are often excluded, we have characterized the various CD subtypes with respect to demographic characteristics, severity and disability, and treatment approaches.

METHODS

As of September 13, 2011, 701 subjects had enrolled in CD PROBE and were analyzed for this report. Baseline characteristics are presented in Table 1.

RESULTS

- Predominant presentation subtypes are described in Figure 1. Subjects presenting with predominant anterocollis or retrocollis experienced an onset at a later age when compared with torticollis or laterocollis (p<0.03; Table 3). The time from diagnosis to treatment was shortest for retrocollis when compared with torticollis (p<0.0001; Table 2).
- Physicians more often rated subjects with anterocollis as severe when compared with other subtypes (p<0.02; Figure 2), and anterocollis subjects scored higher on TWSTRS and its disability subscale (p<0.05; Table 2).
- Subjects with anterocollis or retrocollis scored higher on the CDP-59-P (Figure 4), and subjects with retrocollis were least likely to be employed (p=0.001; Table 2).
- Retrocollis was treated with the highest median dose (190 U) when compared with the other subtypes (p<0.05) and anterocollis the least (115 U; Figure 5).

CONCLUSIONS

- CD presenting with predominant anterocollis or retrocollis is less common but is often associated with increased disease burden, disease severity, and disability; decreased quality of life; and effects on employment status when compared with other subtypes.

Table 1. Baseline Demographic and Disease Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Total</th>
<th>Anterocollis</th>
<th>Laterocollis</th>
<th>Retrocollis</th>
<th>Torticollis</th>
<th>Other</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>Female</td>
<td>536 (75.1)</td>
<td>195 (78.8)</td>
<td>59 (68.3)</td>
<td>258 (75.0)</td>
<td>9 (13.3)</td>
<td>0.077</td>
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<tr>
<td>Male</td>
<td>187 (24.9)</td>
<td>54 (21.2)</td>
<td>40 (47.7)</td>
<td>50 (15.0)</td>
<td>30 (46.2)</td>
<td>6 (9.4)</td>
<td></td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>Asian</td>
<td>16 (2.0)</td>
<td>7 (2.9)</td>
<td>3 (3.6)</td>
<td>6 (1.7)</td>
<td>0 (0.0)</td>
<td>0.354</td>
</tr>
<tr>
<td>Black</td>
<td>14 (1.8)</td>
<td>4 (1.6)</td>
<td>3 (3.6)</td>
<td>5 (1.4)</td>
<td>2 (3.1)</td>
<td>0 (0.0)</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>25 (3.2)</td>
<td>7 (2.9)</td>
<td>5 (6.0)</td>
<td>5 (1.4)</td>
<td>6 (9.4)</td>
<td>1 (1.5)</td>
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<tr>
<td>Native American</td>
<td>1 (0.1)</td>
<td>0 (0.0)</td>
<td>0 (0.0)</td>
<td>0 (0.0)</td>
<td>1 (0.3)</td>
<td>0 (0.0)</td>
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<tr>
<td>White</td>
<td>725 (95.6)</td>
<td>269 (106.0)</td>
<td>90 (106.0)</td>
<td>291 (85.0)</td>
<td>78 (117.0)</td>
<td>6 (9.4)</td>
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</tr>
<tr>
<td>Other</td>
<td>2 (0.3)</td>
<td>1 (0.4)</td>
<td>0 (0.0)</td>
<td>1 (0.3)</td>
<td>0 (0.0)</td>
<td>0 (0.0)</td>
<td></td>
</tr>
<tr>
<td>Age, y</td>
<td>57.7 ± 14.3 (94.0–100.0)</td>
<td>57.1 ± 14.3 (94.0–100.0)</td>
<td>58.2 ± 14.3 (94.0–100.0)</td>
<td>57.3 ± 14.3 (94.0–100.0)</td>
<td>57.9 ± 14.3 (94.0–100.0)</td>
<td>57.9 ± 14.3 (94.0–100.0)</td>
<td>0.763</td>
</tr>
<tr>
<td>Body mass index</td>
<td>26.5 ± 5.4 (3.6–50.1)</td>
<td>26.4 ± 5.4 (3.6–50.1)</td>
<td>26.5 ± 5.4 (3.6–50.1)</td>
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<td>26.5 ± 5.4 (3.6–50.1)</td>
<td>26.5 ± 5.4 (3.6–50.1)</td>
<td>0.824</td>
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<tr>
<td>Task status</td>
<td>Non-naive</td>
<td>502 (64.2)</td>
<td>231 (91.4)</td>
<td>51 (60.2)</td>
<td>136 (39.7)</td>
<td>20 (31.3)</td>
<td>0.005</td>
</tr>
<tr>
<td>Non-naive</td>
<td>280 (35.8)</td>
<td>25 (9.6)</td>
<td>33 (39.8)</td>
<td>207 (58.3)</td>
<td>46 (72.7)</td>
<td>11 (16.7)</td>
<td></td>
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</tbody>
</table>

Table 2. Baseline CD History

<table>
<thead>
<tr>
<th>Subtype</th>
<th>Anterocollis</th>
<th>Laterocollis</th>
<th>Retrocollis</th>
<th>Torticollis</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age ± SD, y</td>
<td>53.1 ± 15.9</td>
<td>53.7 ± 15.9</td>
<td>51.5 ± 17.2</td>
<td>47.7 ± 15.4</td>
<td>52.1 ± 16.9</td>
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<tr>
<td>Time from CD onset to diagnosis, y</td>
<td>3.5 ± 4.4</td>
<td>5.5 ± 8.0</td>
<td>3.9 ± 7.5</td>
<td>5.4 ± 8.9</td>
<td>5.3 ± 8.4</td>
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<tr>
<td>Time from CD diagnosis to first treatment, y</td>
<td>0.7 ± 2.5</td>
<td>0.9 ± 3.2</td>
<td>0.1 ± 0.2</td>
<td>1.4 ± 5.3</td>
<td>1.1 ± 4.2</td>
</tr>
<tr>
<td>Currently employed</td>
<td>157 (73.7)</td>
<td>140 (96.2)</td>
<td>10 (25.0)</td>
<td>143 (65.0)</td>
<td>129 (66.1)</td>
</tr>
</tbody>
</table>

Figure 1. Predominant CD Subtypes at Baseline

Figure 2. CD Severity by Subtype at Baseline

Figure 3. TDWTRS Total Score and Subscores by Subtype

Figure 4. CDP-59 Scores by Subtype at Baseline

Figure 5. Median Total Dose at Injection 1 by Subtype

REFERENCE


Disclosure

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