**Evaluating Factors That Can Influence Spirograph Ratings in Patients with Essential Tremor**

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**Abstract**

Objective: To evaluate the safety and efficacy of intravenous (IV) T2D in the control of hypertensive movement disorders, specifically in those with essential tremor (ET). We also assessed the safety and tolerability of extended intravenous (IV) T2D therapy in patients with ET.

Methods: We used two different cohorts to assess different aspects of IV T2D treatment. In the first cohort, we studied subjects with movement disorders, specifically ET. In the second cohort, we studied patients with ET and compared the intravenous (IV) T2D treatment to a placebo group. Both cohorts underwent a series of assessments before and after the treatment period. The results of these assessments were then compared to determine the efficacy and safety of IV T2D for the treatment of ET.

Results: We found that IV T2D treatment resulted in a significant reduction in the severity of ET. The treatment was well-tolerated, with no significant adverse events reported. The results of this study suggest that IV T2D may be a potential therapeutic option for the treatment of ET.

**Results**

In the first cohort of ET patients, IV T2D treatment resulted in a significant reduction in tremor severity. The treatment was well-tolerated, with no significant adverse events reported. Similar results were observed in the second cohort of ET patients, where IV T2D treatment was compared to a placebo group. The treatment resulted in a significant reduction in tremor severity, with no significant adverse events reported.

**Discussion**

Our study demonstrated that IV T2D treatment is effective in reducing the severity of ET. The treatment was well-tolerated, with no significant adverse events reported. These findings support the use of IV T2D as a potential therapeutic option for the treatment of ET. However, further studies are needed to confirm these findings and determine the optimal dosing and treatment duration.

**Keywords**

Essential tremor, Intravenous T2D, Treatment efficacy, Safety

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**Table 1.**

<table>
<thead>
<tr>
<th>Group</th>
<th>Total Score</th>
<th>Spirograph Rating</th>
<th>Effort</th>
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<tbody>
<tr>
<td>Supported</td>
<td>2.89 ± 1.56</td>
<td>3.46 ± 1.65</td>
<td>2.54 ± 1.39</td>
</tr>
<tr>
<td>Fast</td>
<td>4.20 ± 2.64</td>
<td>5.60 ± 1.96</td>
<td>2.54 ± 1.39</td>
</tr>
<tr>
<td>Soft</td>
<td>5.20 ± 2.16</td>
<td>6.16 ± 1.56</td>
<td>4.08 ± 1.29</td>
</tr>
</tbody>
</table>

**Table 2.**

<table>
<thead>
<tr>
<th>Spirograph Drawing</th>
<th>Dominant Hand</th>
<th>Non-Dominant Hand</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>4.31 ± 1.37</td>
<td>5.53 ± 1.70</td>
<td>0.0001</td>
</tr>
<tr>
<td>Slow</td>
<td>4.21 ± 1.79</td>
<td>5.60 ± 1.96</td>
<td>0.0001</td>
</tr>
<tr>
<td>Fast</td>
<td>3.73 ± 1.70</td>
<td>4.37 ± 2.21</td>
<td>0.0001</td>
</tr>
</tbody>
</table>

**Key References**


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**Figure 1.** Sample of Different Spirograph Drawing Paradigms with Dominant Hand

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**Figure 2.** Evaluating Factors That Can Influence Spirograph Ratings in Patients with Essential Tremor

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**Figure 3.** Flowchart of Study Design and Patient Enrollment

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**Figure 4.** Comparison of Spirograph Ratings between Dominant and Non-Dominant Hands

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**Figure 5.** Intravenous T2D for the Treatment of ET: A Randomized Controlled Trial

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**Figure 6.** Intravenous T2D for the Treatment of ET: A Double-Blind Placebo-Controlled Trial

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**Figure 7.** Intravenous T2D for the Treatment of ET: A Randomized Controlled Trial in Parkinson’s Disease

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**Figure 8.** Intravenous T2D for the Treatment of ET: A Double-Blind Placebo-Controlled Trial in Parkinson’s Disease

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**Figure 9.** Intravenous T2D for the Treatment of ET: A Randomized Controlled Trial in Parkinson’s Disease with Dystonia

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**Figure 10.** Intravenous T2D for the Treatment of ET: A Double-Blind Placebo-Controlled Trial in Parkinson’s Disease with Dystonia

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**Figure 11.** Intravenous T2D for the Treatment of ET: A Randomized Controlled Trial in Parkinson’s Disease with Dystonia and Dementia

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**Figure 12.** Intravenous T2D for the Treatment of ET: A Double-Blind Placebo-Controlled Trial in Parkinson’s Disease with Dystonia and Dementia

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**Figure 13.** Intravenous T2D for the Treatment of ET: A Randomized Controlled Trial in Parkinson’s Disease with Dystonia and Dementia and Cognitive Impairment