Similairities in Postsurgical vs Nonsurgical Patients With Hypoparathyroidism: Post Hoc Analysis From Recombinant Human Parathyroid Hormone (rhPTH[1-84]), Parathyroid Hormone rDNA) REPLACE Study

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BACKGROUND

- Hypoparathyroidism, a rare disorder characterized by absent or low levels of parathyroid hormone (PTH), is most commonly caused by thyroid surgery.
- Data from Denmark indicate that the prevalence of postsurgical hypoparathyroidism (20.6/100,000 inhabitants) is 9 times greater than the prevalence of hypoparathyroidism due to nonsurgical causes (2.3/100,000 inhabitants).
- Both causes are associated with significant morbidity.
- Little is known about characteristics and treatment responses of patients with hypoparathyroidism due to postsurgical versus nonsurgical etiologies.

RESULTS

- Baseline calcium and active vitamin D doses were not different between the 2 groups.
- Per criteria that are now available in the 2015 ESE guidelines, >20% of patients in each subgroup were not well controlled before treatment with rhPTH[1-84], even after optimization with conventional treatment.

Table 1. Demographic and Baseline Characteristics of Patients With Postsurgical and Nonsurgical Hypoparathyroidism

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Postsurgical</th>
<th>Nonsurgical</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age at study commencement, y</td>
<td>49.1±12.4</td>
<td>42.9±12.6</td>
<td>0.014</td>
</tr>
<tr>
<td>Gender, n(%)</td>
<td>Men: 9 (10)</td>
<td>Women: 80 (88)</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Race, n(%)</td>
<td>White: 85 (96)</td>
<td>Asian: 6 (7)</td>
<td>0.400</td>
</tr>
<tr>
<td>Body mass index, kg/m²</td>
<td>29.3±6.1</td>
<td>28.9±6.2</td>
<td>0.794</td>
</tr>
<tr>
<td>Geography, n(%)</td>
<td>North America: 45 (51)</td>
<td>European: 24 (27)</td>
<td>0.159</td>
</tr>
<tr>
<td>Duration of hypoparathyroidism, y</td>
<td>Mean ± SD</td>
<td>12.1±8.8</td>
<td>17.5±12.9</td>
</tr>
<tr>
<td>Active vitamin D dose, µg</td>
<td>Mean ± SD</td>
<td>1.1±0.8</td>
<td>1.2±0.8</td>
</tr>
</tbody>
</table>

CONCLUSIONS

- Patient demographics and baseline characteristics were similar between those with postsurgical and nonsurgical hypoparathyroidism.
- A notable difference is gender distribution with women accounting for 90% of the postsurgical group, whereas men were evenly divided between the 2 groups.
- Treatment response was significantly greater for patients receiving rhPTH[1-84] versus placebo in both groups.
- Findings from this post hoc analysis show no differences in response, as defined by the primary endpoint, to rhPTH[1-84] treatment based on etiology of hypoparathyroidism.

REFERENCES


DISCLOSURES

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