COST-EFFECTIVENESS ANALYSIS OF ELTROMBOPAG AS SUPPORT TREATMENT IN CHRONIC HCV INFECTED PATIENTS WITH THROMBOCYTOPENIA TO ENABLE INTERFERON-BASED REGIMENS IN SPAIN

Javier Parrondo García 1, Diego Rincón Rodríguez 2, Manuel Romero Gómez 3, Ricard Solà Lamoglia 4, Celia Roldán Acevedo 1
1 Departamento de evaluación de medicamentos y gestión sanitaria, GSK España, Tres Cantos, Madrid. 2 Servicio de Digestivo, Hospital Universitario Gregorio Marañón, CIBEREd, Madrid, España. 3 Unidad de Gestión clínica de Enfermedades Digestivas, Hospital Universitario de Valme, Sevilla, España. 4 Sección de Hepatología, Hospital del Mar IMIM, Universitat Autònoma de Barcelona, España.

INTRODUCTION

- While the improvement in the chronic hepatitis C treatment has opened a window to a high-efficiency interferon-free (INF) therapy, there are patients in whom the use of new therapies is not an option. In this population, thrombocytopenia might limit the use of INF-based regimens.
- Eltrombopag, a thrombopoietin-receptor agonist, effectively elevates platelet count allowing optimal INF-based treatment.

METHODS

- A two-phase individual-level model was developed to evaluate the cost-effectiveness of eltrombopag treatment in thrombocytopenic HCV-patients over a lifetime horizon.
- Individual-level models are more flexible and provide more accurate estimations than Markov approaches.
- A set of mathematical distributions were developed using data from trials ENABLE 1 and 2 and local studies, to describe patient characteristics.
- From these distributions, one million theoretical patients were generated and the evolution of each one of them through the patient flow (Figure 1) was simulated for the two treatment alternatives (with and without eltrombopag).

OBJECTIVE

The objective of the present study was to assess the cost-effectiveness of eltrombopag as support treatment in chronic HCV infected patients with thrombocytopenia to enable INF-based treatment regimens from the Spanish Health System perspective.

RESULTS

- Eltrombopag was associated with an average increment of 0.57 quality-adjusted life years (QALY) and an additional cost of €17,084.47/patient (Figure 2).
- The average incremental cost effectiveness ratio (ICER) was 29,808.26 €/QALY (Table 1).

Table 1. Base-case costs and effects results

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Mean cost per patient (€)</th>
<th>Mean incremental cost (€)</th>
<th>Mean incremental QALY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peg/Na/baseline</td>
<td>25,372.45</td>
<td>598.72</td>
<td>10.51</td>
</tr>
<tr>
<td>Eltrombopag + Peg/Na/baseline</td>
<td>25,172.45</td>
<td>598.72</td>
<td>10.51</td>
</tr>
</tbody>
</table>

- Considering a €30,000 threshold, eltrombopag was dominant (D) or cost-effective (CE) in 59.12% (D = 11.29%; CE= 47.84%) of cases (Table 2).

Table 2. Results of the discount sensitivity analyses

<table>
<thead>
<tr>
<th>Discount Rate</th>
<th>Dominant Cost-Effective</th>
<th>No Cost-Effective</th>
<th>Dominated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base case (D)</td>
<td>12.08</td>
<td>47.84</td>
<td>11.20</td>
</tr>
<tr>
<td>Sensitivity analysis 1 (No discount)</td>
<td>10.89</td>
<td>52.76</td>
<td>10.66</td>
</tr>
<tr>
<td>Sensitivity analysis 2 (5% discount)</td>
<td>11.36</td>
<td>51.32</td>
<td>11.20</td>
</tr>
</tbody>
</table>

CONCLUSION

- With the premises taken into account in this study, eltrombopag in thrombocytopenic HCV patients could be considered cost-effective from the Spanish Health System perspective.

REFERENCES


NPS2 SYSTEMIC DISORDERS/CONDITIONS - Cost Studies
Javier Parrondo García

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