Type 2 diabetes mellitus (T2DM) is an important public health concern. By 2030, the number of people with diabetes is expected to reach over 500 million worldwide, based on global organization estimates.

According to the British Society of Gastroenterology, the prevalence of newly diagnosed diabetes in Spain is 13.8%, with a total direct and indirect annual cost of 5,809 million Euros, which represents 8.2% of the total Spanish health expenditure.

Several sensitivity analyses were performed in order to test the robustness of the results. The model performed well tolerated, with an increased incidence of adverse events (AEs) related to the renal system and cardiovascular system. Discontinuation due to AEs was low and generally similar in CANA treated and non-CANA treated patients.

OBJECTIVE

To explore the cost-effectiveness of CANA and DAPA in dual therapy as an addition to metformin (MTF) from the Spanish National Health System perspective.

METHODS

Model Description

The TAP Study Model (TSM, version v1.1) was used to project the long-term clinical and cost outcomes of patients with T2DM based on the results of the TAP Study. The TSM is a population model that was developed to simulate the natural history of diabetes and its consequences of care in a diabetes setting. More information on the TSM can be found in published studies by Palmetto-Orion and the recent model validation.

Clinical Inputs

Further characteristics of the simulation exercise were obtained from a randomized controlled trial of patients with inadequately controlled diabetes on monotherapy (MT).

Economic Inputs

The annual costs of complications were derived from public source literature. If needed, these costs were adjusted to 2010 Euros with a discount rate of 3.5%.

Sensitivity Analyses

Figure 2 shows the cost-effectiveness plane for both comparisons. The majority of points lie in the cost-effectiveness plane, suggesting that the results have acceptable cost-effectiveness.

RESULTS

Table 2: Base Case Results

<table>
<thead>
<tr>
<th>Parameter</th>
<th>CANA 100 mg</th>
<th>DAPA 10 mg</th>
<th>CANA 300 mg</th>
<th>DAPA 10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs (€/year)</td>
<td>1,084</td>
<td>615</td>
<td>800</td>
<td>600</td>
</tr>
<tr>
<td>Quality-adjusted life years (QALYs)</td>
<td>0.263</td>
<td>0.200</td>
<td>0.310</td>
<td>0.240</td>
</tr>
</tbody>
</table>

CONCLUSION

The results suggest that adding CANA 100 or 300 mg instead of DAPA 10 mg in patients inadequately controlled on MT is a more efficient use of health care resources on the Spanish setting.

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