Fesoterodine Is Cost-Effective Relative to Tolterodine and Solifenacin for the Treatment of Overactive Bladder With Incontinence in Spain: Results of an Updated Economic Model

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1 Introduction

- Overactive bladder (OAB) is defined as urinary urgency, with or without urgency incontinence (UI), usually with increased daytime frequency and nocturia, in the absence of urinary tract infection or other obvious pathologies.
- OAB symptoms can be managed with pharmacologic measures (e.g., bladder training, changes in diet) and/or pharmacologic therapy, with antimuscarinic drugs being the first-line treatment option.
- Fesoterodine, tolterodine extended release (ER), and solifenacin are among the antimuscarinics approved for the treatment of OAB.

OAB symptoms are chronic and require long-term treatment, thereby making the cost-effectiveness of treatment an important consideration.

Previous cost-effectiveness studies have used varying data sources and methods to compare the cost-effectiveness of different antimuscarinic drugs.6–8
- Studies on the cost-effectiveness of tolterodine ER compared with oxybutynin and de the solifenacin compared with oxybutynin, propiverine, tolterodine, and fesoterodine have been reported.6,7
- To date, only one study has evaluated the relative cost-effectiveness of fesoterodine.8

2 Objectives

- To calculate the cost-effectiveness of fesoterodine versus tolterodine ER and solifenacin in the treatment of patients with OAB and UUI in Spain.

3 Methods

- A 1-year deterministic economic model (Figure 1) was developed using data from 4 randomized, double-blind, placebo-controlled, 12-week trials of fesoterodine (2 of fesoterodine alone and 2 compared with tolterodine ER11,12 and from a published clinical trial of solifenacin.10
- Inclusion criteria for the fesoterodine and tolterodine ER studies included patients aged ≥50 years with ≥2 urgency episodes per day at UUI episodes per day, and/or ≥2 urgency episodes per day.
- Inclusion criteria for the solifenacin study included patients aged ≥50 years with ≥2 micturitions per day, ≥2 urgency episodes per day, and/or ≥2 urgency episodes per day.

4 Results

- The predicted percentage of patients remaining on treatment and continent at week 52 was higher with fesoterodine (20%) than with tolterodine ER (18%) or solifenacin (15% (Table 1).
- The model predicted that fesoterodine would be the most effective drug with the highest QALYs and be associated with the lowest cost (Table 1).
- After 1 year of treatment, total QALYs were higher with fesoterodine than with tolterodine ER or solifenacin.
- Predicted total costs for fesoterodine were lower than those for solifenacin but higher than those for tolterodine ER.

5 Conclusions

- Overall, this economic analysis suggests that fesoterodine is cost-effective compared with tolterodine ER and cost saving compared with solifenacin for the treatment of OAB and UUI in Spain.

Table 1. Model Outcomes and Incremental Cost-Effectiveness Ratios (ICERs) at Week 52

<table>
<thead>
<tr>
<th>Drug</th>
<th>Responders, %</th>
<th>Total QALYs</th>
<th>Total cost</th>
<th>Antimuscarinic</th>
<th>Medical</th>
<th>Incontinence pads</th>
<th>Comorbidities</th>
<th>Antimuscarinic ICER relative to comparator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fesoterodine 4 mg</td>
<td>16.3</td>
<td>0.752</td>
<td>€2750</td>
<td>€450</td>
<td>€1450</td>
<td>€350</td>
<td>€1700</td>
<td>€1200 / QALY gained</td>
</tr>
<tr>
<td>Tolterodine ER 4 mg</td>
<td>18.0</td>
<td>0.752</td>
<td>€2841</td>
<td>€337</td>
<td>€412</td>
<td>€141</td>
<td>€1280</td>
<td>€1200 / QALY gained</td>
</tr>
<tr>
<td>Solifenacin 10 mg</td>
<td>15.5</td>
<td>0.752</td>
<td>€2750</td>
<td>€450</td>
<td>€1450</td>
<td>€350</td>
<td>€1700</td>
<td>€1200 / QALY gained</td>
</tr>
</tbody>
</table>

6 References

13. This study was sponsored by Pfizer Inc. Editorial support was provided by Karen Zimmermann at Complete Healthcare Communications, Inc., and was reviewed by Pfizer Inc.