OBJECTIVES

- To estimate the budget impact of treatment with Xeomin (incobotulinum toxin A) and Botox (onabotulinum toxin A) based on data from real-world clinical practice.

BACKGROUND

- Botulinum toxins (BoNT-A) are a valuable treatment option for patients with post-stroke upper-limb spasticity (PS-ULS), which affects 33,000 patients in the UK.1
- Xeomin and Botox are two BoNT-A licensed for the treatment of PS-ULS. The treatment costs for Xeomin and Botox will depend on their real-world usage.
- Previous results from this study suggest that Botox and Xeomin can be switched at a 1:1 unit dose ratio with a comparable efficacy and tolerability profile.2

METHODS

- Dosing data were collected for patients switching from Botox to Xeomin treatment between 2007 and 2012 from the Mid-Yorkshire Hospitals Trust (MYHT) UK (comprised of 3 centres).
- The dose of each BoNT-A received per limb at each visit was extracted from the dataset for 7 visits (the 3 visits before and 4 visits after switching).
- In general, switching was initiated at a unit dose ratio of 1:1. Both products were reconstituted to the same volume.
- List prices from the British National Formulary for different vial sizes were applied to these individual patient data (Table 1). When more than one vial was needed, the cheapest set of vials was selected.

RESULTS

- 89 patients (127 limbs) were identified who switched treatment from Botox to Xeomin. Of these, 49 patients (54 limbs) were being treated for upper-limb spasticity and were considered for this analysis. No cases of lower-limb spasticity were considered.
- The proportion of data which were missing from this analysis was found to be 11.4%.
- The average dose of Xeomin was comparable to the average dose of Botox (147.3 vs 157.0 units per limb, p=0.36) (Figure 1).
- In general, switching was initiated at a unit dose ratio of 1:1. Both products were reconstituted to the same volume.
- List prices from the British National Formulary for different vial sizes were applied to these individual patient data (Table 1). When more than one vial was needed, the cheapest set of vials was selected.

TABLE 1. List prices from the British National Formulary3 for different vial sizes of Xeomin and Botox

<table>
<thead>
<tr>
<th>Vial size</th>
<th>Xeomin</th>
<th>Botox</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>£72.00</td>
<td>£119.90</td>
</tr>
<tr>
<td>100</td>
<td>£77.50</td>
<td>£138.20</td>
</tr>
<tr>
<td>200</td>
<td>Not yet available</td>
<td>£276.40</td>
</tr>
</tbody>
</table>

• Missing data were excluded from the analysis – i.e. data were analysed as observed case.
- In this model, the budget impact per year of each treatment was calculated as the average cost per limb per visit, multiplied by the number of limbs, multiplied by the average number of visits per year.

CONCLUSIONS

- Previous results from this study suggest that Botox and Xeomin can be switched at a 1:1 unit dose ratio with a comparable efficacy and tolerability profile.
- The real-world dosing of Xeomin and Botox was found to be comparable when switching between Botox and Xeomin was taken into account, the estimated saving was reduced slightly (£3,086 overall).
- The dosing frequency between Botox and Xeomin was comparable (average time between injections: Botox, 154 days; Xeomin, 156 days) therefore in this model we used the average time between injections across all treatments (155 days).

DISCUSSION

- According to data obtained from real-world clinical practice, the budget impact of Xeomin treatment was lower than that for Botox treatment in PS-ULS patients.
- The findings emphasize the importance of considering real-world dosing data (in addition to dosing information from clinical trials or the summary of product characteristics) in assessing the economic impact of different treatment options.
- Based on the patient case-load at MYHT (estimated to be 500 cases) the total cost saving for this hospital trust would be substantially larger.
- These data might be of use to help support future cost-effectiveness studies or health technology appraisals on a hospital-wide or nationwide basis.
- One limitation of this analysis is that the dataset used to generate the model was incomplete. Another limitation is that it is only based on a subset of eligible patients at one UK hospital trust. Further analyses considering larger patient cohorts would be valuable.

REFERENCES


ACKNOWLEDGEMENTS

Editorial services for this poster were provided by Costello Medical Consulting. All costs associated with development of this poster were funded by Merz Pharma.

DISCLOSURES

All authors received research funding, honoraria and training from Merz Pharma. Alison and Ireen, 1 is an employee of Merz Pharma, JK and SP are employees of Costello Medical Consulting and were contracted by Merz Pharma to work on this study. PD has received a research grant from Merz Pharma.