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MAIN ARTICLE

Co-phenylcaine Forte spray: innovative ways of minimising cost

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Abstract

Objective: To investigate whether multiple-use Co-phenylcaine Forte® spray was more cost-effective than single-use vials.

Methods: A literature review was conducted to determine the risk of cross-contamination associated with multiple-use topical nasal anaesthetic spray. The costs of multiple-use Co-phenylcaine Forte and single-use co-phenylcaine were compared, and potential savings were calculated. The cost of procuring these drugs from other sources was also examined.

Results: Switching to multiple-use Co-phenylcaine Forte spray would lead to at least 40 per cent savings if bought from our local retailer. Potential savings of more than 70 per cent could be made if the drugs were procured from sources other than our local distributor.

Conclusion: Multiple-use Co-phenylcaine Forte spray is safe to use and more cost-effective than single-use vials. This paper illustrates how money can be saved within the National Health Service through changes in drug procurement. Similar cost savings to those calculated for our department could be made in other ENT departments nationally, depending on their annual consumption of co-phenylcaine.

Key words: Phenylephrine, Lidocaine Drug Combination; Cophenylcaine; Epistaxis; Cost Savings; National Health Policy

Introduction

The National Health Service (NHS) is required to make £20 billion in savings by the end of the financial year 2014–2015. Improving procurement has been recognised as a strategic priority, and the cost of pharmaceutical products is under the spotlight. It is therefore vital to find innovative ways of curtailing rising pharmaceutical costs, whilst maintaining or indeed improving the quality of service provided.

Within our ENT department (a tertiary centre), co-phenylcaine (lignocaine 5 per cent and phenylephrine 0.5 per cent) nasal spray contributes to a significant portion of the pharmaceutical expenditure. Topical co-phenylcaine is commonly used in the out-patient setting as an adjunct to flexible and rigid nasendoscopy, and for rhinological procedures such as nasal cautery and manipulation. It is also used in the in-patient setting for rhinological procedures; the vasoconstrictive effects of co-phenylcaine can improve both the ease of passing instruments and the quality of the clinician's view during examinations.[1]

In our department, co-phenylcaine is available only in the form of a single-use, 2.5 ml vial. Although multiple-use Co-phenylcaine Forte spray (Paedpharm Pty, Perth, Australia) has been available for several years, many ENT units in the UK continue to use the single-use vials based on concerns regarding cross-contamination, and because of a lack of awareness of the potential cost savings associated with multiple-use Co-phenylcaine Forte.

This study aimed to investigate whether multiple-use Co-phenylcaine Forte spray was safe with regards to cross-contamination, and whether it was more cost-effective than single-use vials. We also wanted to promote increased awareness of the multiple-use Co-phenylcaine Forte spray amongst ENT departments nationally.

Materials and methods

A literature review was conducted (using Medline and Pubmed databases) to identify studies (published between 1980 and 2012) on cross-contamination risks associated with multiple-use topical nasal anaesthetic (and/or decongestant) sprays.

The use of co-phenylcaine in our centre was reviewed. Information on the number of single-use vials used in 2011 and the associated expenditure was obtained from our records.

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The costs of multiple-use Co-phenylcaine Forte spray and single-use co-phenylcaine vials were compared, and potential savings were calculated. We also compared the cost of procuring these drugs from sources other than our local distributor.

Results

Safety of multiple-use spray

A paper by Rashid and Karagama was the only study we found that has investigated the possibility of cross-contamination with multiple-use nasal sprays.[2] The authors employed two different methods to investigate microbial spread associated with the use of 30 multiple-use spray bottles over a 36-day period. The spectrophotometry results revealed that disposable nozzles did not allow backflow of sprayed solution into the multiple-use bottle. In addition, repeated bacterial culture analysis demonstrated no contamination of the solution in the multiple-use bottle when fresh nozzles were used.

Current cost

From 1 January 2011 to 31 December 2011, 4089 single-use, 2.5 ml co-phenylcaine vials were used in our centre, in both in-patient and out-patient settings. Purchased at £8.98 per vial, expenditure for the total amount used amounted to £36 719 (Figure 1).

Prospective cost savings

Co-phenylcaine is also available in the form of 50 ml bottles (Co-phenylcaine Forte); these have disposable plastic nozzles and are suitable for multiple use. The drug concentration is the same as that used in the small vials. The cost of Co-phenylcaine Forte varies depending on where it is sourced. Our local distributor currently charges £95 per 50 ml bottle, or it can be purchased from online Australian pharmacies for £35 to £40.[3,4]

If Co-phenylcaine Forte spray was used instead of single-use co-phenylcaine vials, the annual consumption of 10 220 ml would approximate 205 bottles (50 ml each). This would cost £19 475 if brought from our local supplier or £8200 if purchased from the online Australian pharmacies.

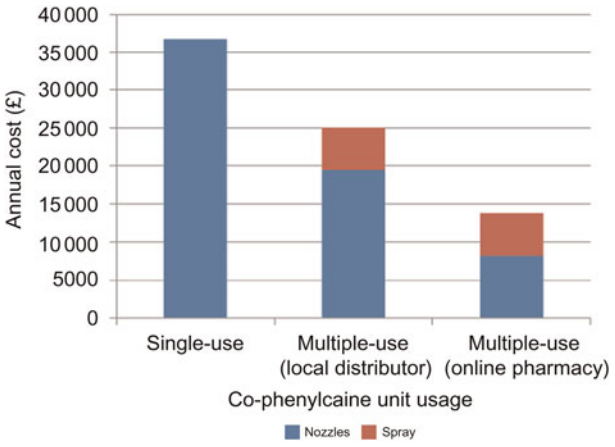

FIG. 1
Annual cost of single-use co-phenylcaine vials compared with multiple-use Co-phenylcaine Forte® spray (2.5 ml per patient).

Co-phenylcaine Forte for multiple usage requires the purchase of disposable nozzles. A pack of 50 plastic nozzles can be procured from the local distributor for £67.50. If usage were estimated based on the current rate for 2.5 ml vials, 20 nozzles per 50 ml bottle would add a cost of £5535 to the total cost of Co-phenylcaine Forte use. This would take the total estimated cost of co-phenylcaine to £25 010 if bought from our local supplier, or £13 735 if bought from the online Australian pharmacies. This would lead to potential savings of £14 700 (40 per cent) if the co-phenylcaine and nozzles were bought from our local retailer, or £25 980 (71 per cent) if bought from the online Australian pharmacies.

Further cost-saving potential

In our experience, a significant portion of the 2.5 ml in the single-use co-phenylcaine vials is wasted after each patient encounter. In the hospital setting, depending on the indication, 2.5 ml co-phenylcaine can be used for two to three patients; hence the cost savings may actually be far higher (based on a reduction of the total amount used).

Discussion

Although multiple-use Co-phenylcaine Forte spray has been available for some time, most ENT units employ single-use vials of co-phenylcaine, and other alternatives such as Otrivine® (xylometazoline) and lidocaine sprays. This is partly based on concerns regarding cross-contamination, and also because of a lack of awareness about the cost savings associated with multiple-use Co-phenylcaine Forte.

The literature indicates that Co-phenylcaine Forte is safe as a multiple-use spray when fresh nozzles are used. In addition, our results demonstrate that the switch to Co-phenylcaine Forte multiple-use spray would represent substantial cost savings for the department. Additional savings can also be made if drugs are procured from sources other than the local distributor, provided that the quality of the product can be guaranteed. However, at present the sprays have to be purchased from our current distributor because of licensing agreements, but negotiations can be made in the future to procure the sprays at a more competitive rate.

- **Multiple-use Co-phenylcaine Forte® spray is more cost-effective than single-use vials**
- **The multiple-use spray is safe; concerns regarding cross-contamination should be allayed**
- **Changes in drug procurement can save money for the National Health Service**

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Switch to xylocaine instead?

It has been argued that switching from single-use co-phenylcaine vials to multiple-use xylocaine (lidocaine) bottles could further increase potential savings.[2] However, xylocaine only has anaesthetic properties; it does not have the vasoconstrictive advantages of co-phenylcaine, which are particularly useful when managing epistaxis. The procurement of multiple-use bottles of both xylocaine and co-phenylcaine might be more appropriate.

Conclusion

Co-phenylcaine Forte spray is more cost-effective than single-use co-phenylcaine vials. Increased awareness of the cost-effectiveness associated with the multiple-use spray could lead to cost savings in ENT departments nationally, depending on their annual consumption of co-phenylcaine. Multiple-use Co-phenylcaine Forte has been reported to be safe, and concerns regarding cross-contamination should be allayed. This paper has also demonstrated how money could be saved within the NHS through changes in drug procurement.

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