Cost Comparisons in Ocular Lubricant Therapy for Dry Eye Disease

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Introduction

- The estimated prevalence of diagnosed dry eye disease (DED) is 6.8% of the United States adult population, but up to 50% suffer from symptoms depending on a study's criteria.[1,2]
- Millions of men and women seek professional help for their symptoms, making DED one of the most reported reasons for patients to seek medical eye care.
- According to the Dry Eye Workshop II Report, DED treatment follows a staged approach in simplicity and cost.[3] Ocular lubricants are the first and least expensive method of treatment and are consistently found to improve symptoms, yet they must be applied frequently throughout the day.
- DED treatment can place a large economic burden on patients. The estimated average annual cost of managing DED was $783. This equates to $3.84 billion given the nationwide prevalence.[4]
- The purpose of this study is to generate a cost comparison of various popular over-the-counter (OTC) preserved, preservative free (PF), aqueous, and lipid-based lubricants and to identify where products are least expensive. Additionally, differences in brand name and store-brand equivalent prices and ingredients were evaluated.

Methods

- Walmart, Walgreens, Meijer, CVS, and Amazon were surveyed for brand name and store-brand ocular lubricants of varying quantities.
- Online and in-store prices for available products and ingredients of store-brand versions were recorded. Only a base price, and not a sale price, was noted for each product.
- An average price was then determined and further used to calculate a monthly cost. PF product calculations were based off 2 vials per day and preserved product calculations were based off 4 times a day dosing.
- A paired T-test was performed with online versus in-store prices to determine statistical significance.

Results

Product	Average Cost ($)	Product	Average Cost ($)
1 fl. oz. Preserved	13.90	60ct PF	22.63
0.5 fl. oz. Preserved	10.70	30ct PF	17.67
Preserved (lipid)	16.69	PF (lipid)	17.69
Preserved (aqueous)	16.53	PF (aqueous)	17.16
Gel	14.07	Nighttime	11.75

Table 1. There was no significant price difference between lipid and aqueous-based products.

Figure 1. No statistical significance was found between online and in-store prices (P=0.48, n=69).

	Preservatives	PF
Brand Name	Purite, Polyquad	Similar Ingredients
Store-Brand	Vanish, benzalkonium chloride, and chlorhexidine	

Table 2. Store-brand preservatives were found to be harsher to the ocular surface than brand name 'disappearing preservatives'.[5,6] Store-brand equivalents were less expensive than brand name products, as the average price difference between them was $5.45 for PF products and $3.60 for preserved.

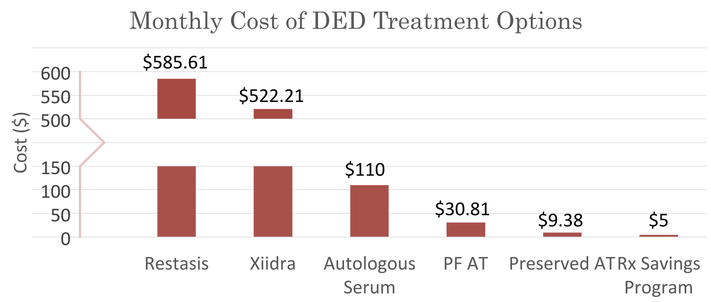

Figure 2. A large disparity exists between OTC ocular lubricants and prescription medications saving programs and the full price prescription cost.[7,8,9]

Conclusions

- It is important that patients are educated on the difference between preserved and PF products as well as brand name and store-brand equivalents. This will ensure they understand and follow through with treatment recommendations and understand why PF or brand name products are worth the extra expense.
- Costs of DED therapy can lowered by:
  1. Recommending larger packaging sizes when available
  2. Purchasing ocular lubricants from Amazon
  3. Potentially using store-brand equivalents for PF products
  4. Prescribing Xiidra or Restasis if a patient qualifies for the savings program or has insurance coverage

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