PROSPECTIVE, CROSSOVER STUDY USING DRY EYE LUBRICANT DROPS ON SYMPTOMATIC SILICONE HYDROGEL WEARERS.

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INTRODUCTION

• Previous studies in contact lens wearers have shown minimum differences in benefit between rewetting drops and saline for symptomatic relief, lens dehydration [1, 2] and PTFL stability [3].

• By contrast, studies on dry eye patients (non-contact lens wearers) have shown that lubricant use provided symptomatic relief [4, 5].

PURPOSE

• To investigate the effect on lens wear (subjective comfort, lens variables, ocular physiology) of using a lubricant drop pre and post lens wear in silicone hydrogel contact lens wearers with moderate symptoms of discomfort.

METHODS

• Single masked, randomised, controlled, 2-week crossover (n=36), including dry eye lubricant for CL wear (Rewetting drops during CL wear), daily wearers of silicone hydrogel contact lenses.

Table 1: Subject data

<table>
<thead>
<tr>
<th>Sex</th>
<th>25% M, 75% F</th>
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<tr>
<td>Age (yrs)</td>
<td>35 ± 12</td>
</tr>
<tr>
<td>Lens wear experience</td>
<td></td>
</tr>
<tr>
<td>Acuvue® Advance® with Hydraclear® (Vistakon, 42%)</td>
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<tr>
<td>Focus® Night and Day® (CIBA Vision, Duluth, GA) 42%</td>
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<tr>
<td>PureVision™ (Bausch &amp; Lomb, Rochester, NY ) 44%</td>
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• The test solution was Syntane™ dry eye lubricant drops and the control saline (Quest). lubricant use was bilateral.

• Subjects were instructed to instil the relevant study solution 10-15 minutes prior to lens insertion and again after lens removal.

RESULTS

• With the use of test solution, there was decreased use of other rewetting drops during the day (p=0.03, Day 14) (Figure 2).

• Paired analysis across both phases showed less burning/stinging sensation (p=0.05) with the test solution (Figure 3).

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• The use of a viscous dry eye lubricant pre and post lens wear appears to improve lens wear comfort for this type of silicone hydrogel contact lens. The mechanism may be due to increased fluid volume, improved tear film stability or reduced interstitial friction. Although increased lubricant viscosity can printing solution corneal contact lens, this can also cause short-term visual blur [6]. No effect on vision was observed in this study.

• When used with this type of silicone hydrogel lens, lubricant drop use was found to be safe and without detrimental effects on vision, lens fitting, deposits or corneal/conjunctival staining.

REFERENCES

1. Elsner KG, Taylor AL, et al. The Effect of Both Dry Eye and Lubricant on Symptoms and Tear Film Stability. CLAO J. 2001:7(4):159-164

• Test solution use was more likely to be associated with the subjective impression of improved “all day” (Figure 6) and “end of day” (Figure 7) dryness sensation.

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DISCUSSION

CONCLUSIONS

ACKNOWLEDGEMENTS

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