



Clinical Effectiveness of Lid Debridement with BlephEx Treatment

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ABSTRACT

Purpose: Eyelid disease is a common cause of evaporative dry eye. Lid scrubs and warm compresses done consistently will address this problem but poor compliance makes an office based procedure desirable. Korb found the debridement-scaling of the lower lid margin provides statistically significant symptom relief and improvement in the meibomian gland (MG) function. The Bleph Ex provides a method of accomplishing lid debridement without using a surgical instrument. This study compares signs and symptoms before and after BlephEx treatment.

Methods: Twenty subjects all with MG dysfunction were examined at baseline using a biomicroscope using the Efron scale for grading. Subjects also had a TBUT and OSDI performed. The subjects were then treated with the BlephEx according to manufacturer's directions. 4 weeks later all testing was repeated. Data was analyzed by a t-test with post hoc test for significance.

Results: Subjects TBUT improved from 3.31+/-1.3 to 5.47+/-4.3 p=0.05. Blepharitis on the Efron scale improved from 1.24+/-0.69 to 0.575+/-0.54 p=0.01. MG dysfunction also dramatically improved from 1.65+/-0.5 to 0.76 +/- 0.59 p=0.01. Symptoms also improved based on the OSDI which went from 43.74+/-14.27 to 20.33+/-14.35 p=0.01.

Conclusions: This study suggests BlephEx is a viable alternative to lid scrubs and warm compresses. Statistically significant improvement was observed in signs and symptoms of the subjects treated. Eyelid functions improved based on TBUT increase, reduced inflammation and enhanced MG function. Subjects were 50% less symptomatic after treatment. BlephEx appears to be a reasonable clinical approach for use non-compliant MG dysfunction patients.

BACKGROUND

Rynerson introduced a new instrument in 2014 that aims at reducing the effects of blepharitis. The minimal invasiveness of the instrument makes it ideal for use by optometrists.

This study examines changes in the signs and symptoms of the ocular surface before and after treatment with BlephEx.

METHOD

20 subjects with MGD and dry eye symptoms participated in a prospective randomized study.

All subjects underwent an initial baseline examination.

All subjects then received the BlephEx treatment according to the manufacturer's directions.

Outcome measures obtained at baseline and 4 weeks post-treatment included:

Biomicroscope examination using the Efron Grading Scale to grade MGD and Blepharitis severity

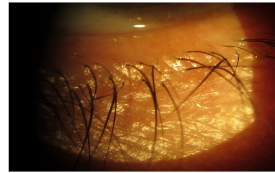
Ocular Surface Disease Index (OSDI)

Tear Break-Up Time

Data was analyzed by a t-test with post hoc test for significance.

EFRON GRADING SCALE

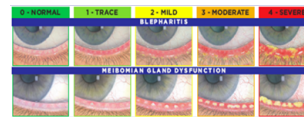
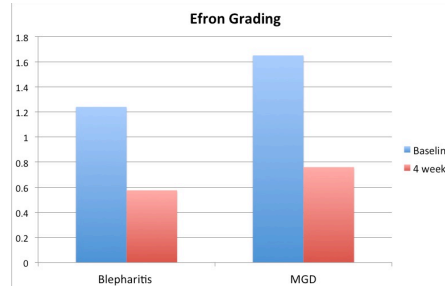
Before



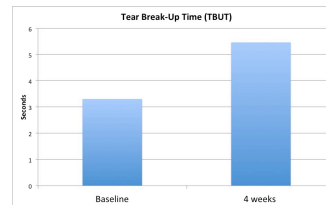
After



Inferior lid margin OS; pre-treatment blepharitis rated 2+ (moderate), 4 weeks post-treatment rated 0 (normal).



Efron grading scale for Blepharitis and MGD



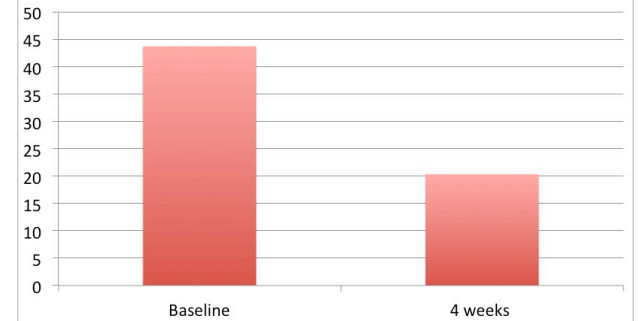
RESULTS

- TBUTs significantly improved 4 weeks after treatment (p= 0.05)
- Blepharitis on the Efron Scale significantly improved 4 weeks after treatment (p=0.01)
- MG Dysfunction drastically improved 4 weeks after treatment (p=0.01)
- Symptoms also improved based on the OSDI 4 weeks after treatment (p=0.01)

EYELID DEBRIDEMENT



Ocular Surface Disease Index (OSDI) Questionnaire for Dry Eye



CONCLUSIONS

- BlephEx is a viable alternative to the conventional treatment (lid scrubs and warm compresses) for blepharitis
- Statistically significant improvement in signs & symptoms 4 weeks after treatment
- Increased TBUT, decreased inflammation, and increase in MG function after treatment
- Subjects were 50% less symptomatic after treatment