

Use of a Mechanical Eyelid Device for the Routine Office Treatment and Prophylaxis of Dry Eye Disease, Blepharitis and MGD



ASCRS 2025

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Purpose

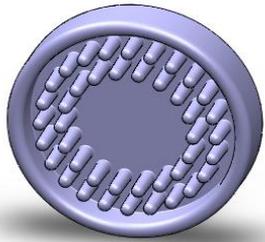
- To evaluate the safety, efficacy and patient satisfaction with a single in-office treatment with a mechanical device to treat Dry Eye Disease (DED), Blepharitis and Meibomian Gland Disease (MGD).
- To determine if routine office use of this device may be useful in the treatment and long-term progression of these chronic conditions

Before



After





Device Advantages

- Oscillating brush head for ease of control and improved comfort
- Single use disposable tips with smooth edges for safety
- Readily performed by technical staff
- Rapid treatment time to allow for integration into standard clinic workflow
- Affordable platform to allow for widespread implementation and adoption

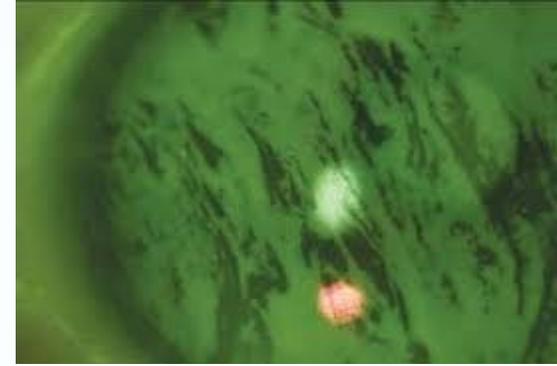


Method

- **Prospective Single-Center study:**
 - EyeSight Hawaii (John Olkowski, MD)
- **All patients were maintained on their existing treatment regimen**
- **12 patients (24 eyes) treated**
- **Treatments done by trained office technical staff.**
- **Eyes treated with eyelids closed for 60 seconds each.**
- **Single use tip with a gel applied (NuLids Gel)tm**
- **Inclusion Criteria:**
 - OSDI \geq 23
 - TBUT \leq 7 seconds in 1 eye
- **Exclusion Criteria:**
 - Active inflammation of the eye
 - Eye surgery in the last 3 months
 - Previous Herpes infection of the eye



Method

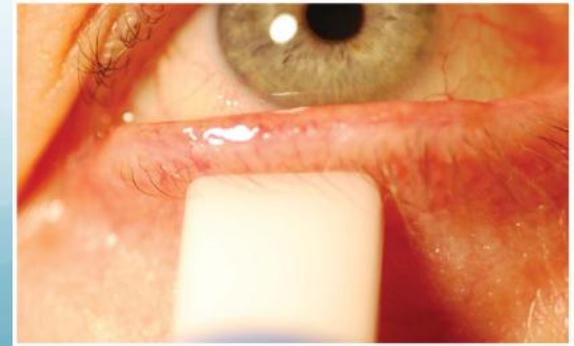


Protocol

A single eye was treated by a trained technician with the physician/examiner being blinded to this choice. Both eyes are evaluated at 1 month at which point both eyes are treated by the technician and the patient is then examined after an additional 2 months (3 months from initial evaluation)

Test Performed (at Baseline, 1 month and 3 months)

- OSDI Dry Eye survey
- Tear Breakup Time (TBUT)
- Meibomian Glands Yielding Liquid Secretions (MGYLS)
- Satisfaction with treatment survey



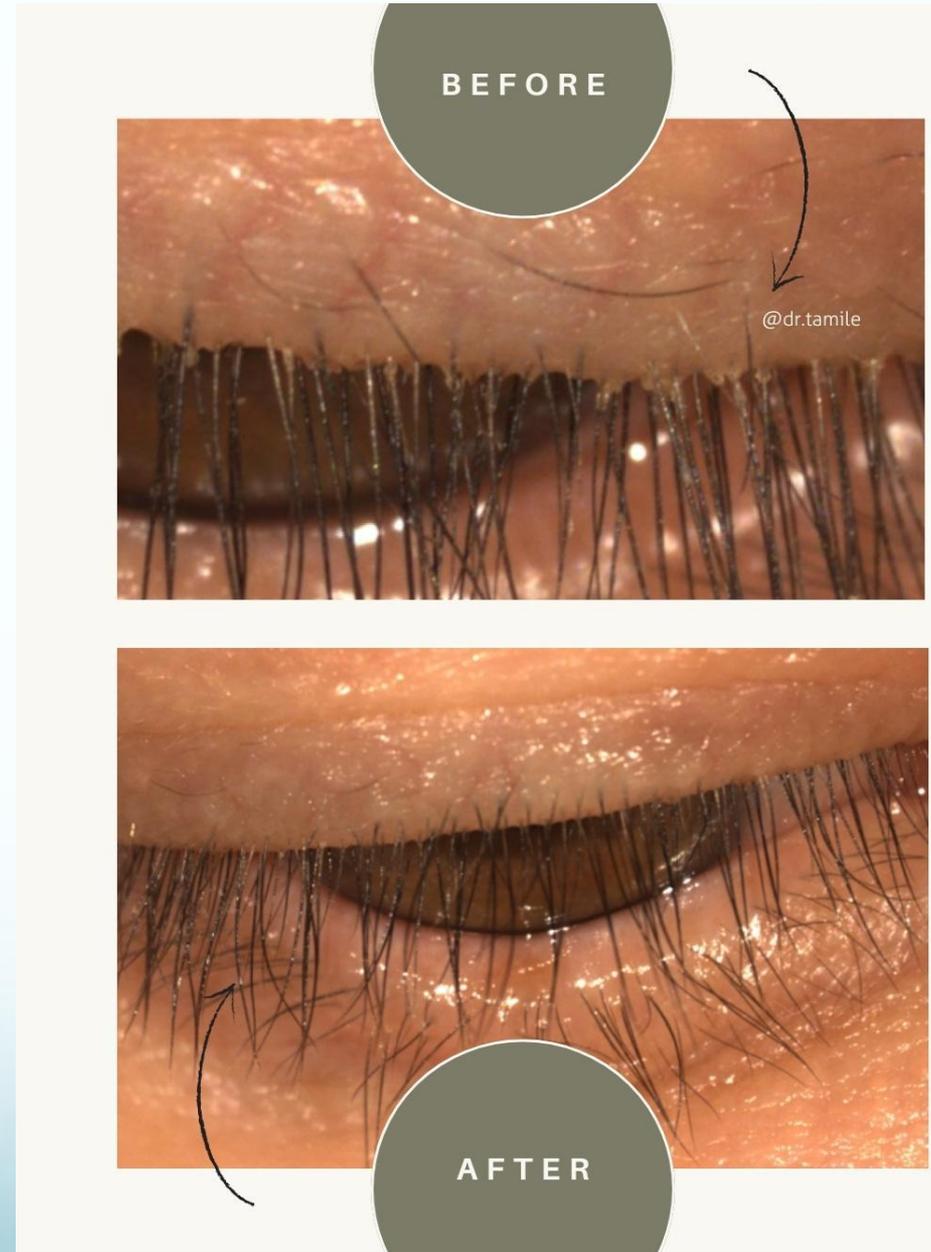
Results

N = 12

Average age: 65 (41-85)

Gender: 11 Female, 1 Male

- No adverse events
- No trauma to lids, cornea or conjunctiva
- No patients dropped out of the trial due to discomfort

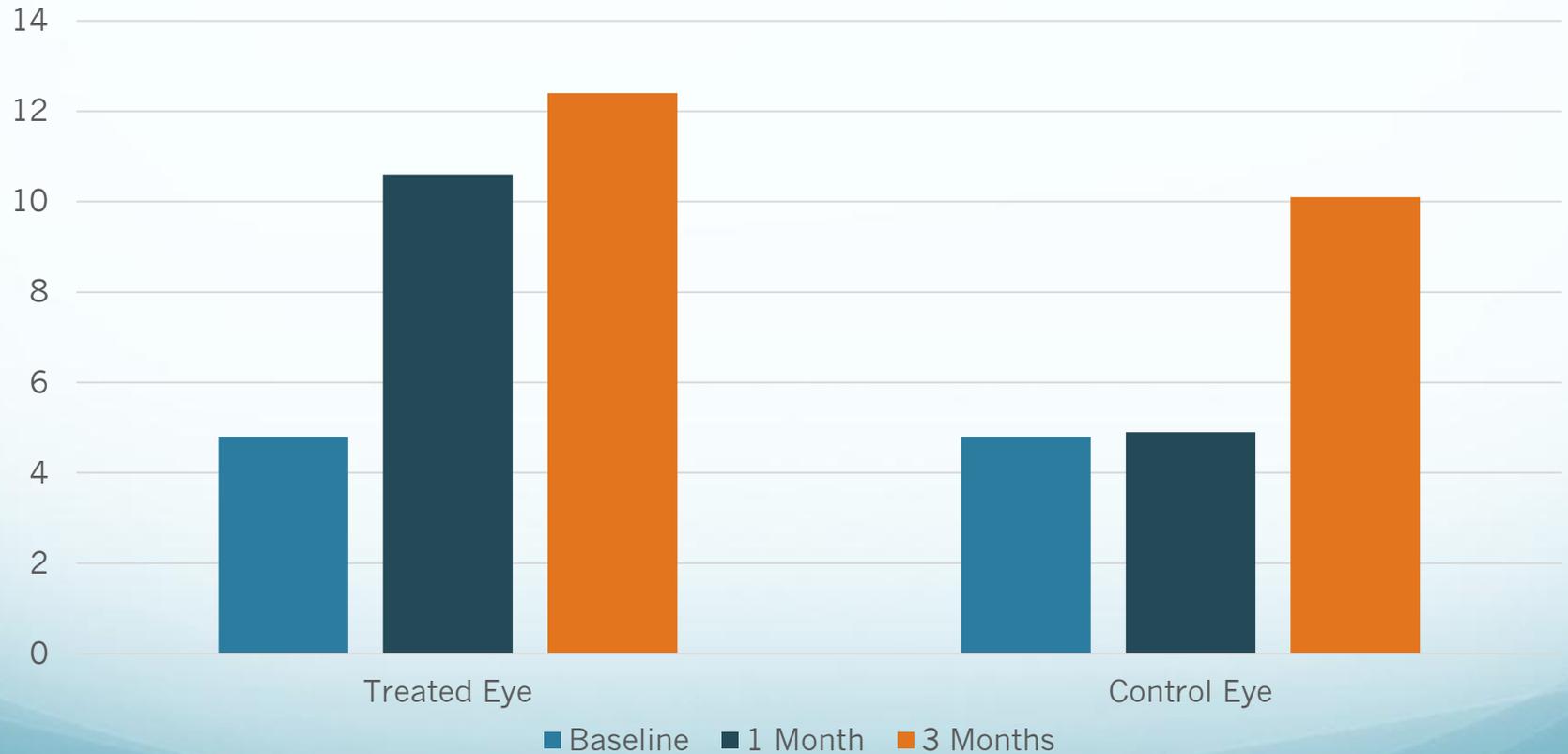


Results

	OSDI	TBUT		MGYLS	
		Treated Eye	Control Eye	Treated Eye	Control Eye
Baseline Exam	46	4.8	4.8	0.25	0.41
One eye treated					
1 Month Exam	31	10.6	4.9	2.58	0.66
Both eye treated					
3 Month Exam	22	12.4	10.1	4.6	4.7

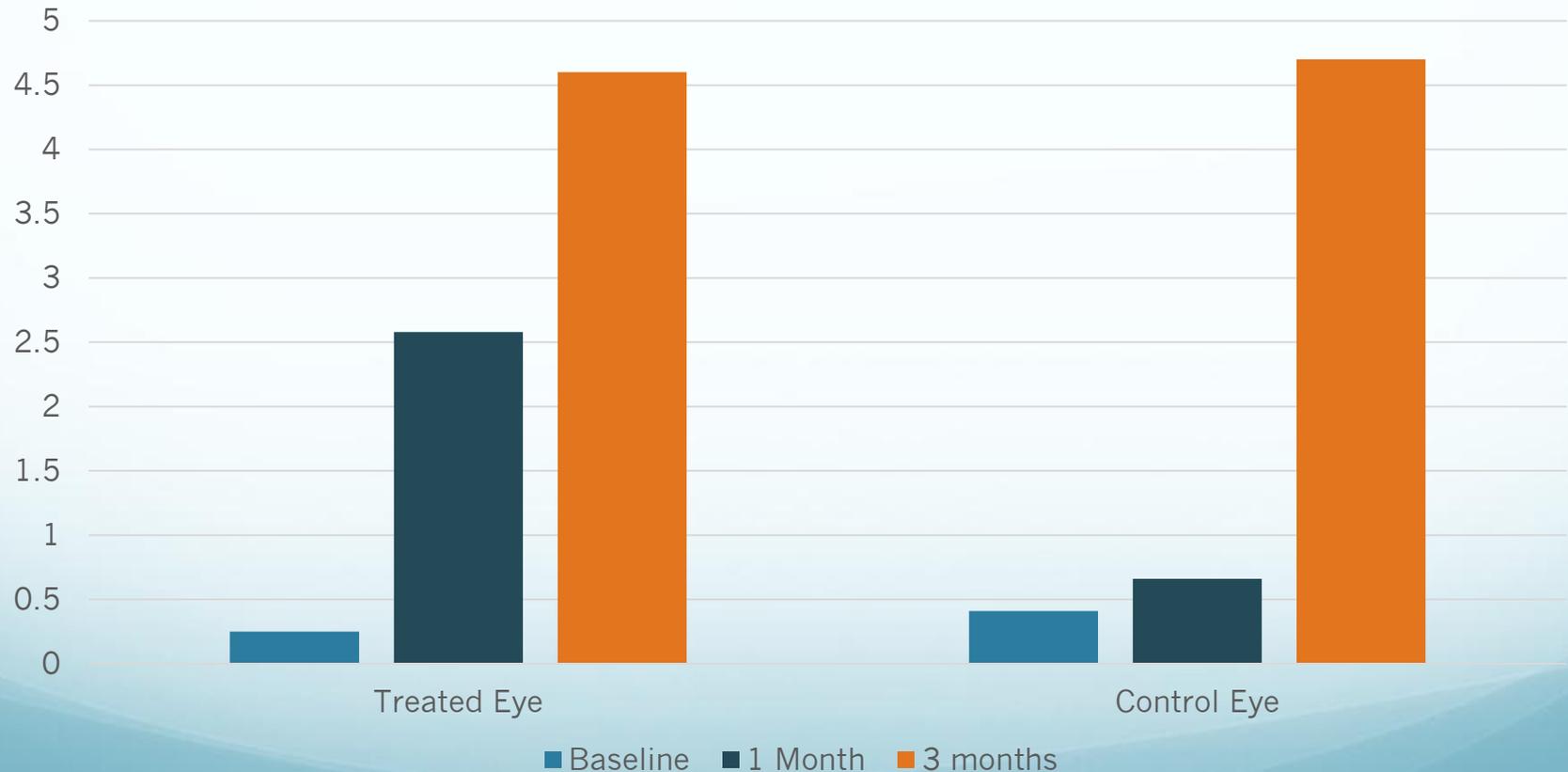
Tear Breakup Time (secs)

Treated eye treated at Baseline visit
Both eyes treated at 1 month visit

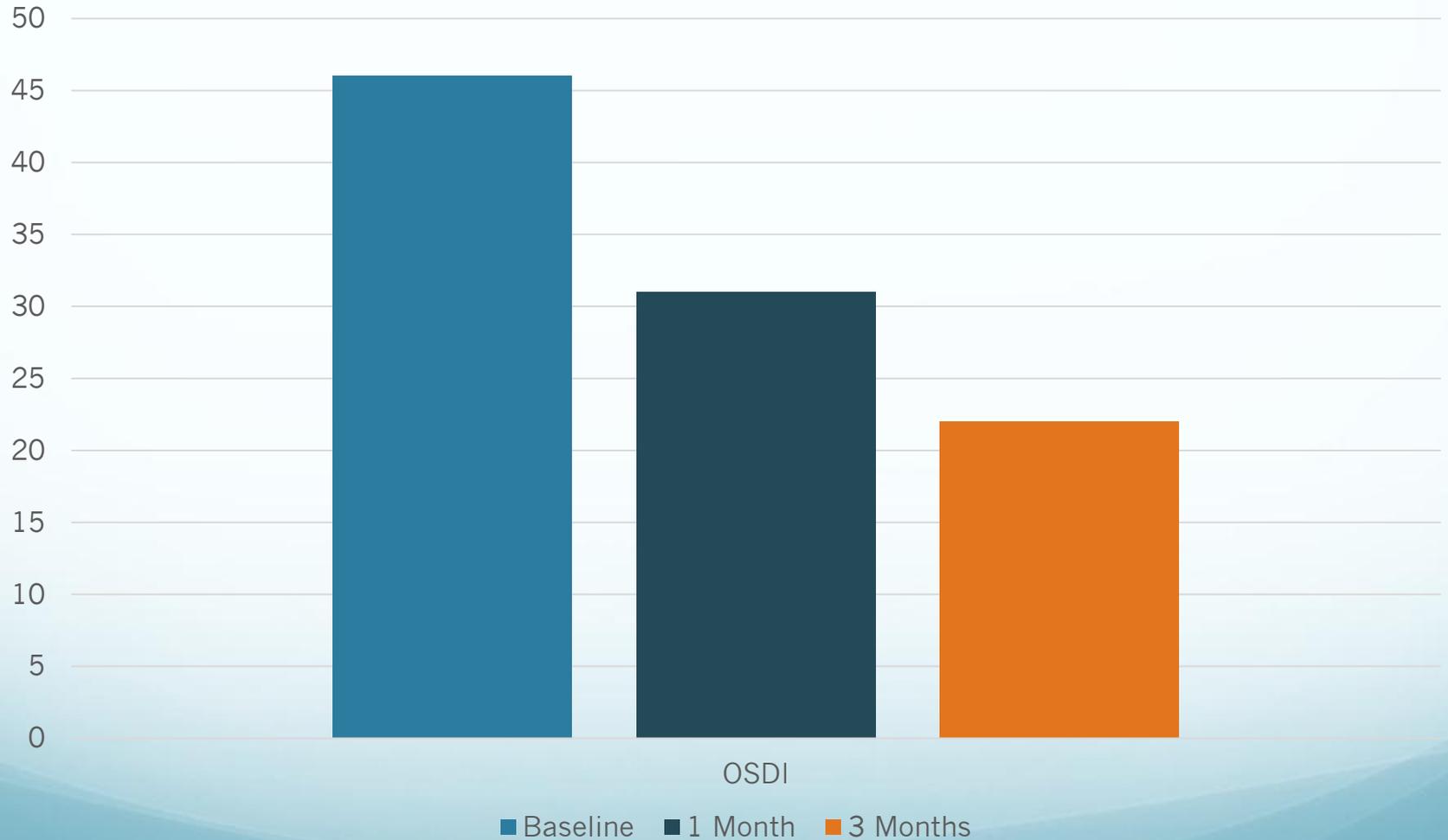


Meibomian Glands Yielding Liquid Secretion

Treated eye treated at Baseline visit
Both eyes treated at 1 month visit



OSDI Dry Eye Score



Survey Results

- **92%** felt the treatment was comfortable or fairly comfortable
- **83%** would have the treatment performed on a routine basis



Conclusions



- This mechanical device was safely used in office by technical staff to treat DED, blepharitis and MGD
- There was an improvement in signs and symptoms after a single treatment which were maintained for an extended period of time
- High patient satisfaction along with significant efficacy supports the use of this device during all routine eye exams to potentially prevent the long-term progression of DED, blepharitis and MGD
- A longer study period, larger sample size and a varied degree of disease severity would provide additional valuable data to optimize treatment protocols.