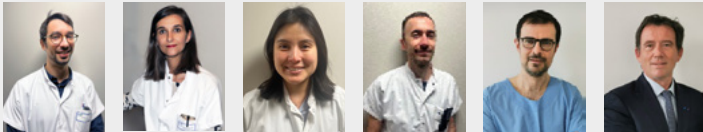


Efficacy and safety of intense pulsed light delivered by the C.Stim® for treatment of meibomian gland dysfunction

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[LINK TO THE STUDY](#)

PURPOSE OF THE STUDY

C.Stim® is a new IPL (intense pulsed light) device for the treatment of Meibomian Gland Dysfunction (MGD), which is the most common cause of dry eye disease worldwide.

The purpose of this study was **to evaluate the efficacy and safety of C.Stim® IPL at 3 months in patients with moderate MGD** using subjective and objective criteria provided by Lacrydiag® ocular surface analyser.

METHOD OF THE STUDY

- 35 patients with moderate MGD treated with C.Stim® were included in this retrospective, observational and non-randomised single-centre study.
- **3 IPL sessions** were performed at D0, D15 and D45 with 4 shots per side (3 to the cheek-bone and 1 to the temple).
- The study was carried out with **3 months of follow-up**, which allowed to evaluate that the **effect of the IPL device is maintained over the time**.

RESULTS OF THE STUDY

- **Improvement in 7 parameters of ocular surface:** NIBUT, TBUT, OSDI, Oxford, Meibum quality, Meibum expressibility, Interferometry.
- C.Stim® IPL treatment appears to be an effective, simple and safe treatment: **none of the treated patients experienced any side effect or undesirable effect.**

NUMBERS OF PATIENTS

35 patients



FOLLOW-UP TIME



7

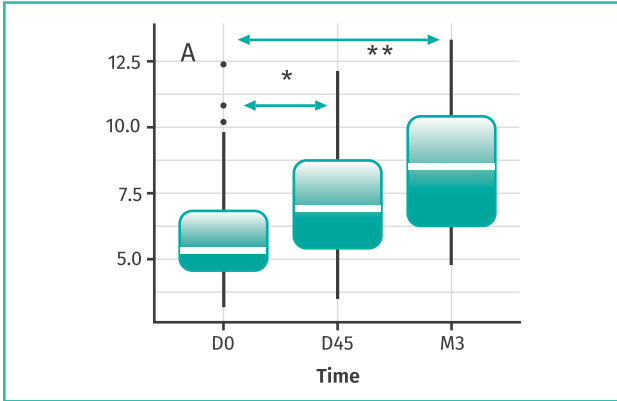
parameters of ocular surface improved

0

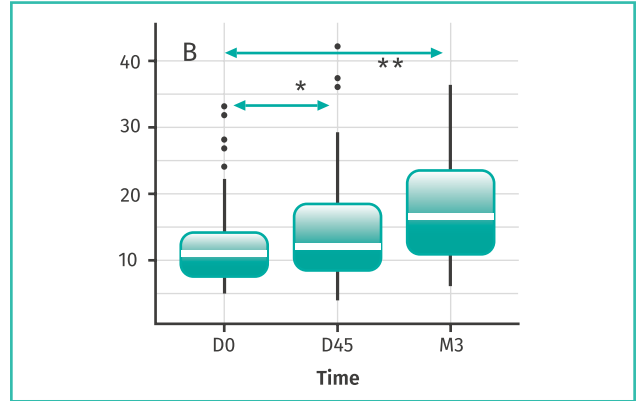
side effect or undesirable effect

1 NIBUT Non-invasive tear break-up time

2 TBUT Tear break-up time



- D0 to D45: + 1.2s
- D0 to M3: + 2.6s



- D0 to D45: + 2.6s
- D0 to M3: + 5.6s

Conclusion

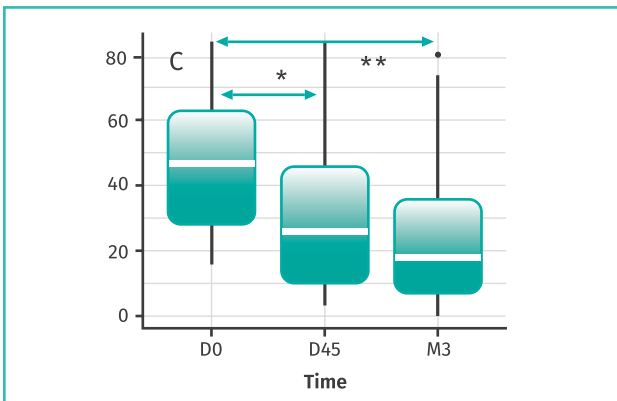
Patients treated by C.Stim® experienced an improvement of the tear film stability proven by an increase of 2.6 seconds from day 0 to 3 months of the NIBUT.

Conclusion

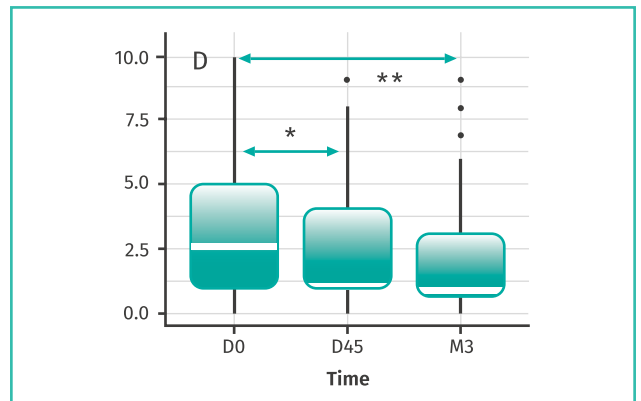
Patients treated by C.Stim® experienced an improvement of the tear film stability proven by an increase of 5.6 seconds from day 0 to 3 months of the TBUT.

3 OSDI

4 Oxford



- D0 to D45: - 18.2 points
- D0 to M3: - 20.7 points



- D0 to D45: - 0.4 points
- D0 to M3: - 1 points

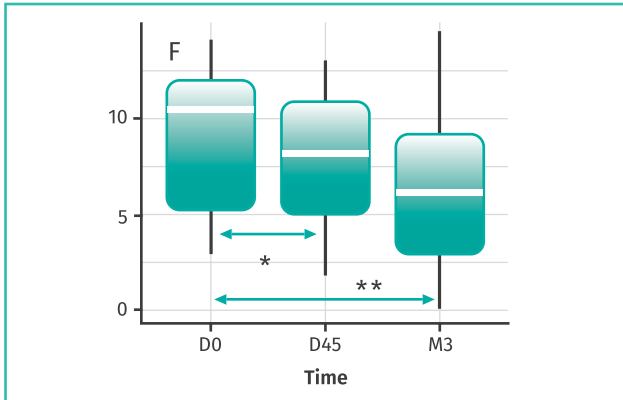
Conclusion

A decrease of the OSDI shows that C.Stim® treatment improved dry eye symptoms. The mean OSDI decreased from 46.4 (severe symptoms) at D0 to 25.3 (moderate symptoms) at 3 months.

Conclusion

C.Stim® treatment leads to a reduction of the Oxford score after 45 days and 3 months shows that there is an improvement in the quality of the ocular surface.

5 Meibum quality



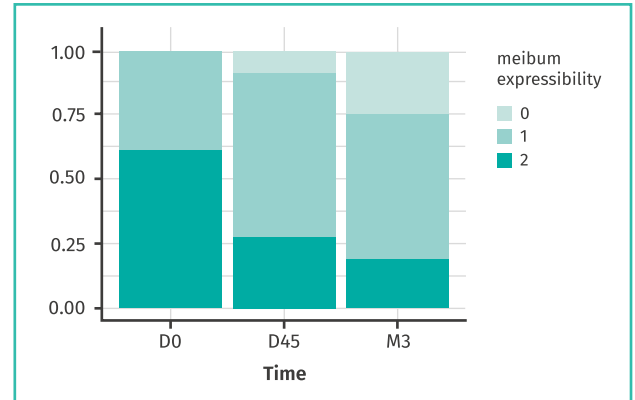
- D0 to D45: - 1.7 points
- D0 to M3: - 2.7 points

Conclusion

A decrease of the meibum quality score of 2.7 points from D0 to 3 months shows that C.Stim® treatment improved functioning of MG. Lower is the meibum quality score better is the meibum quality.

6 Meibum expressibility

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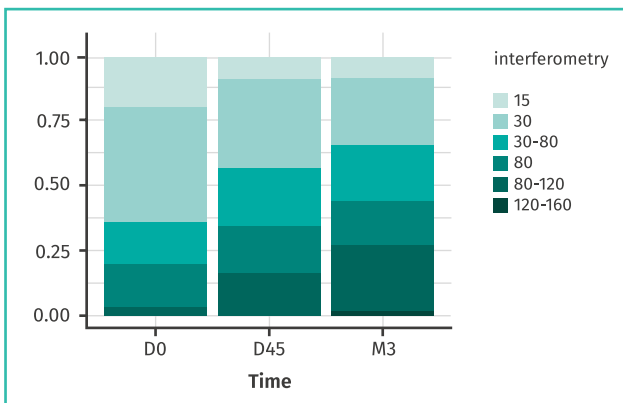


- D0: 0% of score 0
- D45: 8% of score 0
- M3: 25% of score 0

Conclusion

An increase of the percentage of low score from D0 to 3 months shows that C.Stim® treatment improved functioning of MG. Lower is the meibum expressibility score better is the gland expression.

7 Interferometry



- D0: 4% of score 120-160
- D45: 15% of score 120-160
- M3: 25% of score 120-160

Conclusion

An increase of high score interferometry from D0 to 3 months shows that C.Stim® treatment improved the lipid layer. Higher is the score better is the tear film lipid layer quality.

CONCLUSION

The results show the beneficial role of C.Stim® IPL treatment on the meibomian glands and therefore on the lipid component of tear. Meibum quality and expression are improved after treatment. Improvements in NIBUT, as well as TBUT and interferometry, indicate a more stable tear film. This correlates with an improvement in patients' symptoms and therefore quality of life, reflected by a decrease of OSDI score. A decrease of Oxford Score indicates an improvement in the condition of the ocular surface.

In addition, the C.Stim® filter that limits ultraviolet rays and reduces absorption by melanin, which makes it possible to treat skin phototypes 1 to 5. The fluence provided by a train of 5 pulses used in this study helps to reduce tissue heating, inflammatory reaction and pain in patients.

These results demonstrate that C.Stim®, as well as being effective and safe, is a simple device and a good alternative for the treatment of MGD.



PATIENT QUALITY OF LIFE IMPROVED



PATIENT SATISFACTION



LONG LASTING RESULTS



SAFETY



We have been using the C.Stim® IPL device in our routine medical practice for several years now. This has enabled us to optimize the management of our patients' meibomian dysfunctions. As a complement to eyelid care, IPL can improve the quality and expression of meibum, limit the need to use artificial tears several times a day, and improve the evaporative component of dry eye syndrome. IPL sessions are fast and safe. The vast majority of patients are satisfied and ask to be treated every year.

Dr Marie-Caroline Trone

c.stim®

