CLINICAL CASE

DRY EYE

Moderate Meibomian Gland Dysfunction (MGD), **Demodex blepharitis**

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Key words

Dry eye syndrome (DES) – Meibomian gland dysfunction (MGD)
Dry eye – Blepharitis – Demodex - Ocular surface – Tear film
OSDI – Intense pulsed light (IPL) - C.Stim® – TFOS-DEW II

Summary

Diagnosis and treatment of **Dry Eye Syndrome (DES)** in a male patient with **Demodex blepharitis leading to MGD.** A full diagnosis was performed by means of clinical examination and in vivo confocal microscopy. **C.STIM® intense pulsed light treatment** plus eyelid hygiene was initiated in this patient. After three months, **a significant improvement in functional signs and meibum quality was observed, with almost no Demodex sleeves visible.**

1. Clinical examination
2. Confocal microscopy examination
3. IPL treatment C.Stim®
4. Results at three months

Patient history

- 57-year-old man
- Teacher
- Eyes stuck together in the morning upon waking
- Symptoms mainly occur in the morning, with fluctuating blurred vision upon blinking
- Dry eye syndrome that has been debilitating for several months, with the prescribed symptomatic treatment offering little relief: stinging, itching and photophobia

1 Clinical examination

Interview :

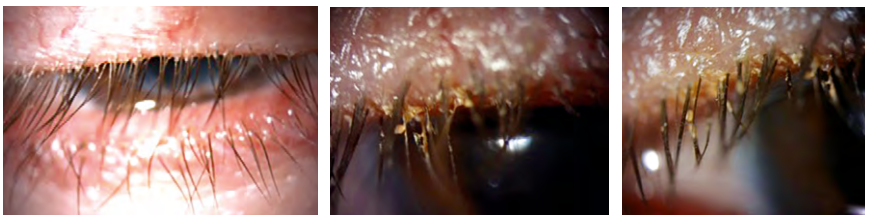
- Identification of DES risk factors:
  => History of OD corneal transplant
- OSDI = 35.4
- Good compliance with symptomatic treatment:
  artificial tears, eyelid care (massage)
- Free margins cleaned in the evening with tea tree oil wipes: not tolerated
  (inflammatory reaction of the eyelids leading to discontinuation after a few days)

Eye examination:

OD		OS
8/10 Pa 2 -2.00 (-2.25 at 110°) add+2.00	VA	10/10 Pa2 -1.50 (-0.75 at 180°) add+2.00
15 mmHg	IOP	17 mmHg
Transplant clear A few spots of SPK lower down	Cornea	Cornea clear A few spots of SPK lower down

Slit lamp examination: Mild to moderate MGD/Demodex blepharitis

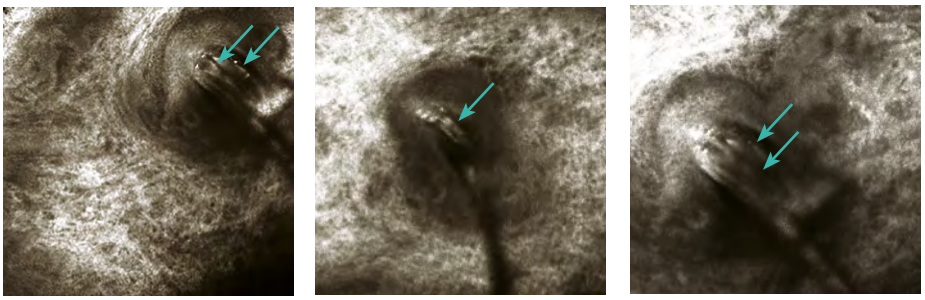
- Incomplete blinking
- OD BUT 5 seconds and OS BUT 4 seconds with significant tear instability



Moderate MGD with sleeves around eyelashes and crusting+++

2 In vivo confocal microscopy (Vivascope 3000)

Demodex blepharitis visible under in vivo confocal microscopy: reflectance at an infundibulum of a eyelash filled with elongated, parallel bodies corresponding to ***Demodex folliculorum***



Diagnosis

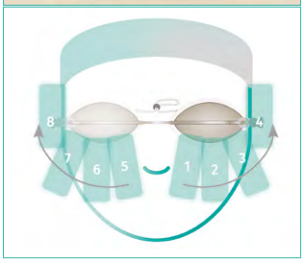
Evaporative dry eye syndrome with meibomian gland dysfunction and Demodex blepharitis

3 C.STIM® I.P.L. Treatment

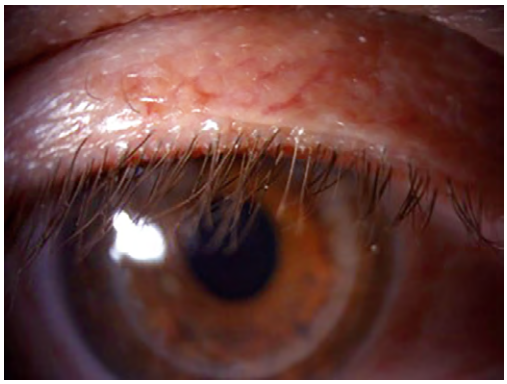
- Symptomatic treatment continued

- C.STIM® IPL treatment

- Three sessions on D0, D15 and D45
- Four shots per side per session at a fluence of 8 J/cm²
- Protective goggles worn by patient and doctor
- Meibum expression after each session (with forceps)



4 Results at three months

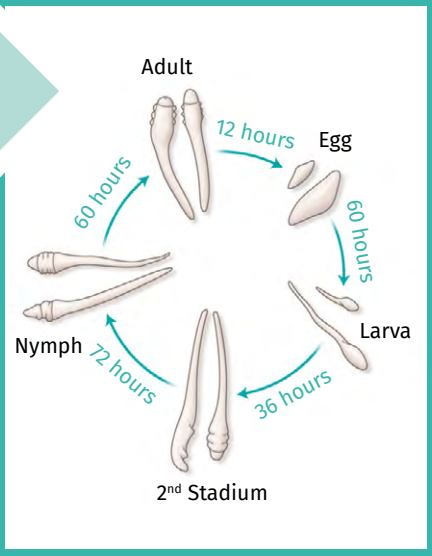


- **Improvement in functional signs**
- **Improvement in meibum quality** and almost total disappearance of sleeves

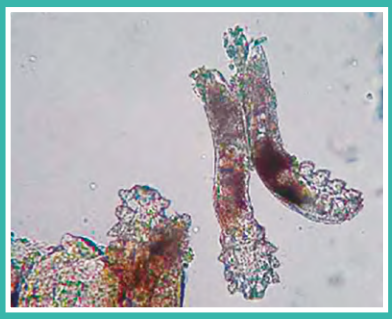
Conclusions

IPL treatment is effective against Demodex blepharitis in combination with, or as an alternative to, symptomatic treatment (e.g. cleaning the free margins with tea tree oil wipes).

Focus on Demodex



- **Responsible for symptomatic and non-symptomatic blepharitis/MGD**
- **Sleeves around the roots of the eyelashes**
- **Sometimes visible under in vivo confocal microscopy**
- **Conclusive diagnosis: parasitological examination of eyelashes**



Figures: SFO [French Society of Ophthalmology] Report 2015, Ocular Surface

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