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## Keywords

Dry eye syndrome (DES) – Dry eye – Meibomian Gland Dysfunction (MGD)  
LacryDiag® – Meibography – Ocular surface – Tear film – TFOS-DEW II  
OSDI – Intense pulsed light (IPL) – C.STIM®

## Summary

Diagnosis and treatment of a male patient with evaporative **dry eye syndrome (DES)** and **moderate meibomian gland dysfunction (MGD)** aggravated by long periods of computer use. A full diagnosis was performed by means of clinical examination and **LacryDiag®** examinations. This patient received IPL treatment one year ago and was retreated with **C.STIM® IPL**. After three months, the patient's daily discomfort had **disappeared and his MGD was improved, with better meibum quality and expression.**

1

Clinical  
examination

2

LacryDiag®  
examination

3

Initial  
treatment

4

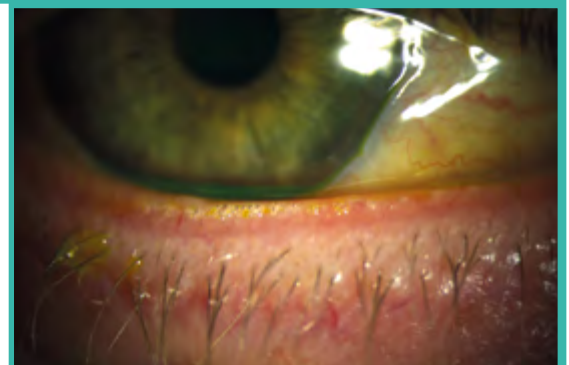
C.STIM® IPL  
treatment

5

Results at 3  
months

## Patient history

- 29-year-old man
- Notary clerk
- MGD already diagnosed, treated for three years
- Long-term symptomatic treatment: eyelid care and tears
- IPL treatment one year ago with good functional results
- Came back in due to a relapse that began several weeks ago despite good symptomatic treatment compliance: red, stinging eyes in the morning upon waking and at the end of the day. Intermittent fluctuating vision, especially when working at the computer for long periods.



# 1 Clinical examination

**Interview :**

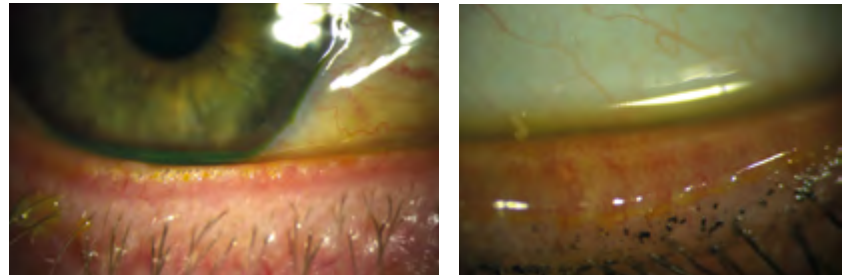
- Recent risk factors for DES ? NO
- OSDI : 25

**Eye examination :**

OD		OS
8 mmHg	IOP	9 mmHg
10/10 Pa 2 -0,75 (-0,50 à 180°)	VA	10/10 Pa2 -1,25
Clear A few spots of SPK lower down	Cornea	Clear A few spots of SPK lower down

**Slit lamp examination :**

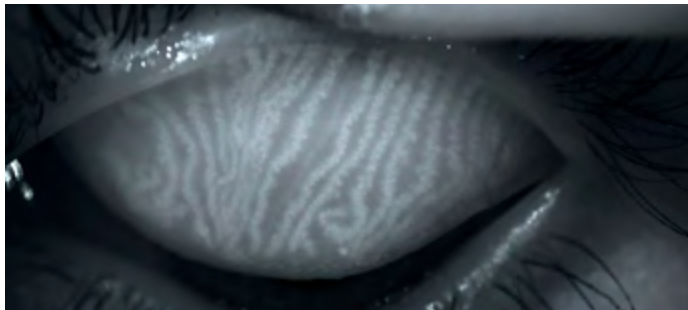
Moderate MGD with a few blocked glands, thick meibum with a few deposits, foamy tears



# 2 Ocular surface analysis by Lacrydiag®

**Meibography:**

- Meibomian glands slightly dilated
- Atrophy of several meibomian glands



## Diagnosis

Relapse/aggravation of **moderate meibomian gland dysfunction (MGD)**  
=> responsible for **evaporative dry eye syndrome (DES)**

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## Initial treatment

Symptomatic treatment continued :

- Instillation of preservative-free artificial tears multiple times daily
- Eyelid care (heating and massaging of the eyelids)
- Blinking exercises

Role of environmental factors : avoid air conditioning, check sleeping conditions (do not overheat the room, use a humidifier), avoid passive smoking, etc.



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## C.Stim® IPL treatment

- Three sessions on D0, D15 and D45
- Protective goggles worn by patient and doctor
- Four shots per side per session at a fluence of 8 J/cm<sup>2</sup>
- Meibum expression after each session with forceps



## Focus on manual expression of meibomian glands with forceps



- **At the end of each IPL session**
- **Using a slit lamp, under local anaesthesia** (1 drop of oxybuprocaine or tetracaine)
- **Apply gentle pressure to the free margin of the lower eyelids using specialist forceps**
- **The heat from the IPL treatment makes it easier to extract the meibum from each meibomian gland**



*=> Manual expression of meibum with forceps after each IPL session optimises the treatment results*



## Results at three months

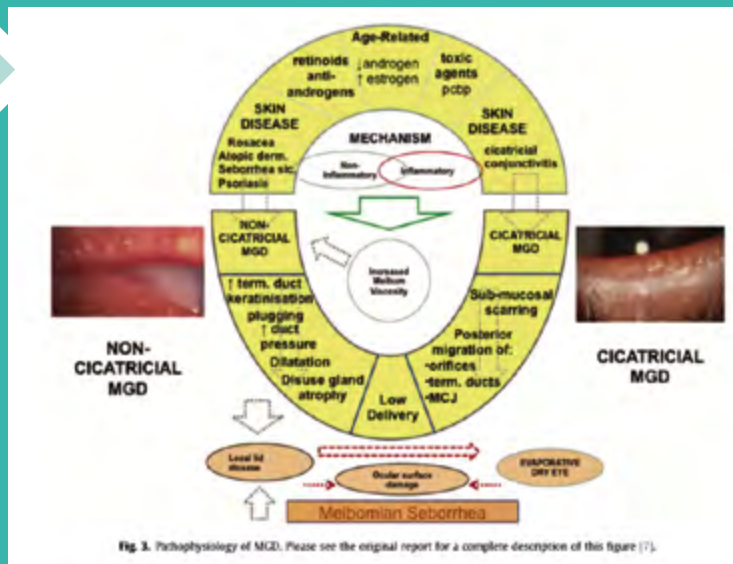
- Improvement in functional signs: daily discomfort gone
- Improvement in MGD: better meibum quality and expression
- One-year check-up scheduled, with IPL retreatment if necessary

## Conclusion

- IPL treatment can be repeated depending on the evolution of the MGD (every year, for example)
- Manual expression of meibum with forceps after each IPL session optimises the treatment results

## Focus on Meibomian Gland Dysfunction (MGD)

### Aetiology of MGD



### Classification of MGD

0



1



2



3



4



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The LacyrDiag® ocular surface analyser is a non-invasive, class I diagnostic medical device, designed and manufactured by SBM Sistemi and distributed by Quantel Medical.  
The C.Stim® is a class IIb medical device designed and manufactured by Quantel Medical and compliance assessed by LNE/G-MED « CE 0459 » - DECEMBRE 2022 - XS\_CLINICAL\_CASE\_04\_CSTIM\_221219