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## Key words

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

## Summary

Diagnosis and treatment of a female patient who wears soft contact lenses and has **Dry Eye Syndrome (DES)** with **mild Meibomian Gland Dysfunction (MGD)**. A full diagnosis was performed by means of clinical examination and **C.STIM® intense pulsed light treatment** was initiated. After three months, **a reduction in symptoms was observed and contact lens comfort had improved throughout the day.**

1

Clinical  
examination

2

Initial  
treatment

3

C.STIM®  
IPL treatment

4

Results at  
3 months

## Patient history

- 24-year-old woman
- Medical student
- Short-sighted, wears soft bi-monthly lenses
- Happy, but fluctuating vision at the end of the day when wearing lenses, with discomfort, stinging and gritty sensation



1

# Clinical examination

## Eye examination:

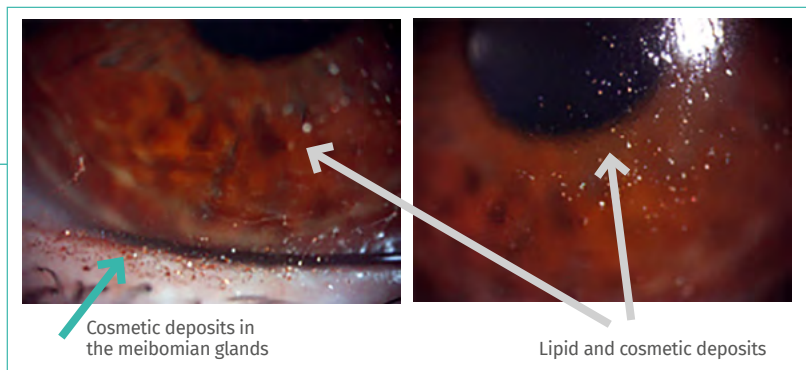
## Interview:

- Contact lens use  
=> risk factor for DES
- OSDI in lenses = 25

## Slit lamp examination:

Cosmetic deposits +++  
in the meibomian glands

| OD   | OS           |  |
|--|--------------|--|
| 12 mmHg  | IOP          | 11 mmHg  |
| 10/10 Pa2 -4,00  | VA           | 10/10 Pa2 -5,50  |
| Good centring<br>Good movement<br>Lipid and cosmetic deposits ++ | Lenses       | Good centring<br>Good movement<br>Lipid and cosmetic deposits ++ |
| Clear fluo-  | Corneas      | Clear fluo-  |
| 8 seconds  | BUT          | 7 seconds  |
| Fine telangiectasia, cosmetic deposits +++ inside glands         | Free margins | Fine telangiectasia, cosmetic deposits +++ inside glands         |
| Incomplete   | Blinking     | Incomplete   |



## Diagnosis

**Significant deposits on contact lenses** related to **mild Meibomian Gland Dysfunction (MGD)**, causing **evaporative Dry Eye Syndrome (DES)**

- ▶ Major contact lens discomfort
- ▶ Risk of giving up contact lenses

## Focus on lipid deposits on lenses

- **Linked to MGD:** lipid deposition varies depending on:
  - the chemical composition of the lens material
  - variations in the composition of the tear film from one individual to another
  - blinking quality
  - environmental factors
- ▶ **Aggravated by the current health context** (*working from home, increased screen time, wearing masks, etc.*)
- **Prevention:** emphasise the importance of massaging/rinsing lenses, renew more frequently (fortnightly or every day)
- **Treatment:** optimise MGD treatment (*eyelid care, blinking exercises, gentle CCTH treatment, I.P.L., etc.*)

## 2

### Initial treatment

- Blinking exercises
- Eyelid care (*heating and massaging of the eyelids*)
- Instillation of low viscosity, preservative-free artificial tears onto lenses if necessary during the day
- Tips on lens care +++: massaging lenses after removal and before soaking, oxidising or multifunctional care products
- Avoid applying make-up to the free margin of the lower eyelids



### Two-month check-up

- Lenses are more comfortable, patient is carrying out the prescribed care (massaging/blinking)
- But still some discomfort and vision sometimes blurred at the end of the day
- Clinical examination: Mild MGD, presence of lipid deposits, no cosmetic deposits

- ▶ **C.STIM® IPL treatment initiated**
- ▶ **Symptomatic treatment continued**



## 3

### C.Stim® IPL treatment

- 3 sessions on D0, D15 and D45
- 4 shots per side per session at a fluence of 8 J/cm<sup>2</sup>
- Expression of meibum with forceps after each session



**NB:** Make sure lenses are removed before each session if very filmed over



### Results at 3 months

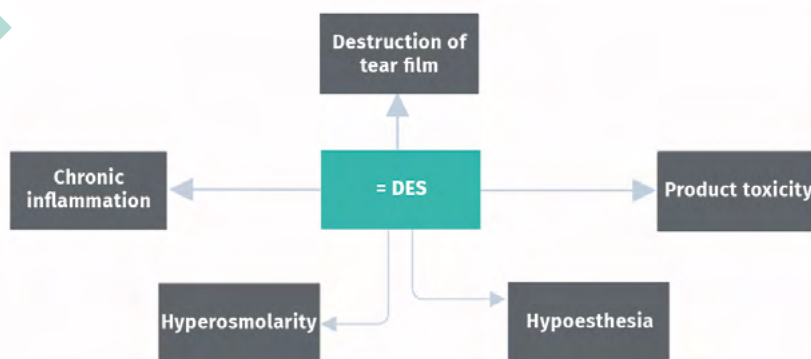
- ▶ Improvement in symptoms
- ▶ Lipid deposits no longer present on lenses
- ▶ Lenses much more comfortable throughout the day

## Conclusions

- Ocular surface examination and treatment of dry eye syndrome/MGD essential prior to any contact lens adjustment
- IPL treatment helps fight lipid deposits on lenses, which can cause discomfort and potentially lead to the patient giving up on lenses

## Focus on Dry Eye Syndrome (DES) and contact lenses

### Impact of contact lens use on the ocular surface:



Any pre-existing pathology or additional event can trigger **DES** in a contact lens wearer.

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