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Key words

Dry Eye Syndrome (DES) - Dry Eye - Ocular Surface Disease (OSD) - C.Diag® - Meibomian Gland Dysfunction (MGD) - Pediatrics - Vernal keratoconjunctivitis (VKC) - Meibography - C.Stim® - Chalazion - Intense Pulsed Light (IPL)

Summary

Diagnosis and treatment of a child with **vernal keratoconjunctivitis (VKC)** associated with **Meibomian Gland Dysfunction (MGD)**.

A full diagnosis was made via **clinical examination** and **meibography using C.Diag®**. **Intense Pulsed Light treatment using the C.Stim® IPL system** was started for the patient.

After 6 months, meibum quality had improved with an expressible, fluid consistency.

1

Clinical
examination

2

C.Diag®
paraclinical
examination

3

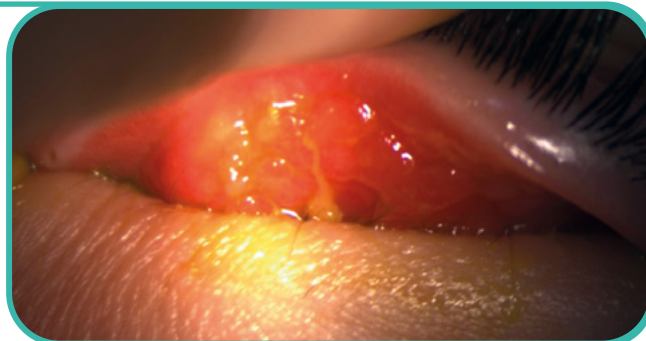
C.Stim®
IPL treatment

4

Results
at 6 months

Medical history

- Paul, an 8-year-old child
- Urgent medical attention after experiencing red, painful eyes for several days
- Highly sensitive to light
- Good health, no medication
- Seasonal pollen allergies



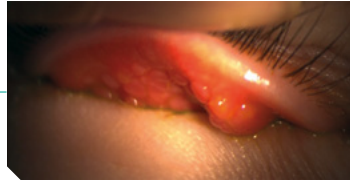
Ophthalmological examination:

- The child was extremely photophobic and struggled to open his eyes
- The slit-lamp examination was difficult

OD		OS
+1,50	Refraction	+1,25
Not possible	VA	Not possible
Not possible	IOP	Not possible

=> **Giant papillae were, however, visible during eyelid eversion.**

- The rest of the examination revealed a clear cornea in both eyes
- No vernal plaque
- No Trantas dots

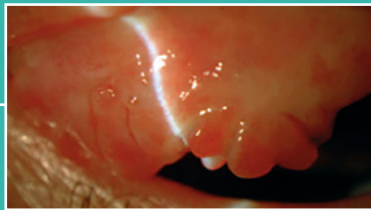


Diagnosis:

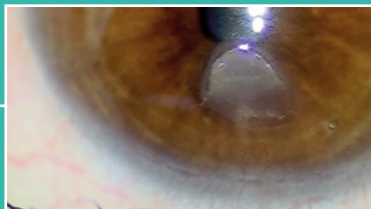
Vernal keratoconjunctivitis (VKC)

Focus | Clinical signs of VKC

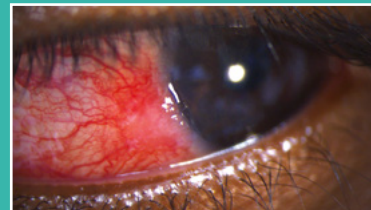
Giant papillae



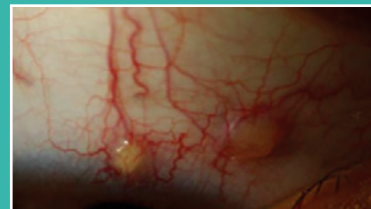
Vernal plaque



Limbus



Horner-Trantas dots



Initial treatment

- A short course of rapidly tapering high-dose topical corticosteroids
- Eye bathing with saline solution several times a day
- ZALERG® topical antihistamine and mast cell anti-degranulation treatment
- Photoprotection including cap and sunglasses
- Patient monitored for 48 hours

Evolution

- Symptom improvement
- Cortico-dependence observed

=> **Introduction of VERKAZIA® cyclosporine-based eye drops at a dose of 1 drop 4 times a day**

=> **Allergy testing confirmed a grass allergy in particular and desensitisation treatment was initiated.**

Follow-up

- Attacks less frequent but Paul sometimes experienced stinging or burning eyes
- 3 episodes of chalazion occurred in 2 months

ophthalmological examination:

- Refraction under cycloplegia checking: minor optical correction of hypermetropia (OD +1.25 and OS +1.00) prescribed.



2 Paraclinical examination

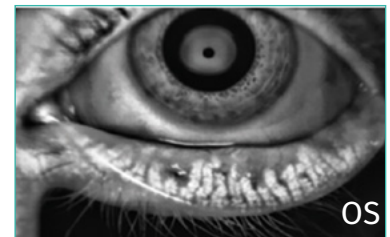
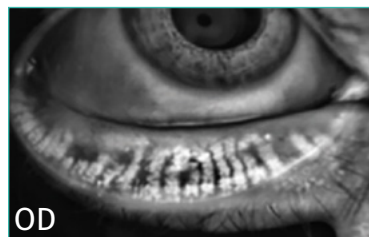
C.Diag® Meibography

=> Fast, easy and painless

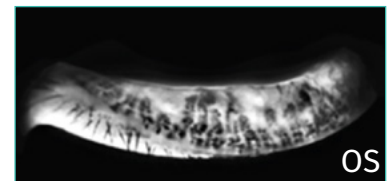
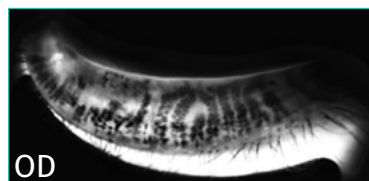
C.Diag® chin rest adaptor for children



Infrared images



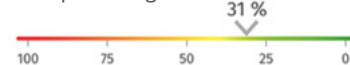
Transilluminable infrared images



Gland quantification



Loss percentage



31 %

Loss percentage



19 %

Diagnosis:

Minor Meibomian Gland Dysfunction (MGD) with very thick, difficult-to-express meibum.

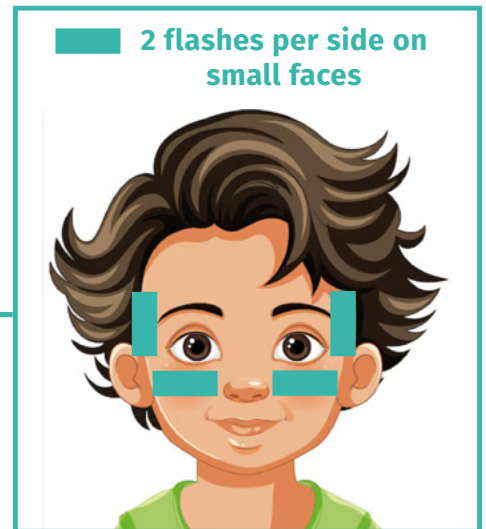
Follow-up

- Eyelid care difficult to implement, with poor compliance
- The meibum still thick with numerous episodes of chalazion at 6 months

➔ **IPL sessions offer along with continued eyelid care**
(with an easier-to-use electrical heated mask)

3 C.Stim® IPL treatment in children

- 3 sessions
- Forceps extraction is not systematically used in young people as it can be perceived as "traumatic"



4 Follow-up (6 months)

- ▶ No episodes of vernal keratoconjunctivitis
- ▶ A single episode of chalazion
- ▶ Improvement of eyelid care
- ▶ Improvement of meibum quality with a fluid and expressible consistency

Conclusion

- It is easy to take meibography images of children using the C.Diag® system
- IPL sessions can be carried out on children presenting with MGD associated with VKC:

➔ **Fewer shots on small faces (1 on the temple and 1 on the cheekbone)**

➔ **No forceps extraction**