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VISION CARE INSTITUTE

How to manage patients with Marginal Keratitis (Marg K)

INFLAMMATORY EVENT

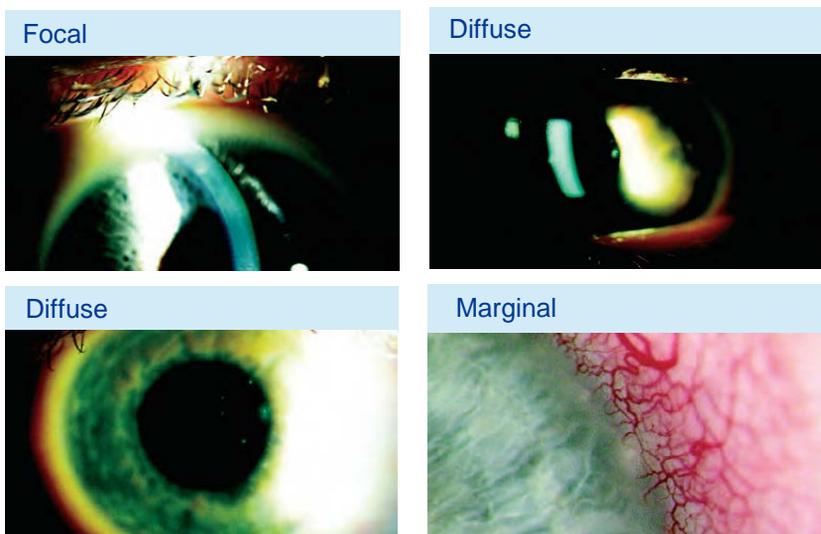
WHAT YOU NEED TO KNOW

Slit Lamp Viewing:

1. With fluorescein and yellow barrier filter. Optical section to assess depth
2. Medium/high magnification (16 - 25x)
3. Direct focal illumination

Grading:

- Grade 0: None
- Grade 1: Trace
- Grade 2: Mild
- Grade 3: Moderate
- Grade 4: Severe
- Location: superior, inferior, nasal, temporal
- Central or peripheral



Incidence:

- 1% DW hydrogel lens wearers, 10% EW hydrogel lens wearers, 5 -10% with SiHs (DW or EW)
- Can occur in non-lens wearers
- Higher in smokers

Aetiology:

- Infiltrative event other than those identified as Contact Lens Peripheral Ulcer (CLPU) or Microbial Keratitis (MK)
- Sterile corneal infiltrates — inflammatory reaction with anterior stromal infiltration due to: hypoxia, closed eye, tight lens, bacterial toxins, denatured lens deposits, solution toxicity, lid margin disease, poor hygiene, allergic reaction, adenoviral infection, mechanical trauma

Risk Factors:

- High ametropia (>5D), younger age (15-25 years), lens case contamination, environmental influences, solution induced corneal staining (SICS)

Symptoms:

- Lens intolerance and foreign body sensation
- Photophobia and lacrimation
- Episodes of acute red eye, onset later in the day

Signs:

- Moderate bulbar redness, focal stromal infiltrates often at 4 and 8 o'clock due to staphylococcal exotoxins
- With/without epithelial involvement (staining). Can be bilateral

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WHAT YOU NEED TO RECOMMEND TO YOUR PATIENTS

Recommendations:

- Temporary discontinuation of lens wear until infiltrates disappear and no other signs or symptoms
- Careful monitoring, ocular lubricants and cold compresses
- No medication required in most cases (unless infiltrates severe and on visual axis); may benefit from prophylactic antibiotic drops
- Resolution often within 14 days (longer with greater severity)
- Reduce bioburden and organism contamination
 - Case hygiene (including rubbing & tissue wiping)
 - Lid hygiene (warm compresses and lid scrubs)
- For SICS, ensure a rub & rinse step, alter combination of SiH and MPS, switch to non-preserved solution or change to DD lens
- After resolution of IK, change to DW, lid hygiene, increase lens oxygen performance, loosen lens fit, increase lens replacement frequency, change care system, review lens handling and hygiene

Prognosis:

- Rarely scars so prognosis good as long as visual axis not involved — resolves within 2 weeks
- Small residual scars may result depending on cause and depth of infiltration
- Certain subjects prone to recurrent inflammation — stop any EW

Differential Diagnosis:

MK, epidemic keratoconjunctivitis, corneal dystrophies, corneal nerves, herpes simplex, old corneal scar



HOW TO FIND OUT MORE

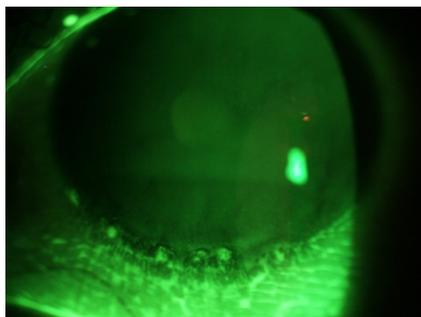
- ❖ Click [here](#) for a general refresher on slit lamp techniques
- ❖ Click [here](#) to watch our educational video on slit lamp examination using optical section

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PATIENT CASE STUDY



Patient TP, a 23-year-old trainee accountant, is a -7.00D myope who has been wearing monthly replacement SiH lenses for up to 30 nights' extended wear over the past nine months.

She attends for an unscheduled appointment complaining of repeated episodes of sore, red, watery eyes over the previous few weeks and is now unable to tolerate her lenses for more than four hours a day.

Quiz:

1. What slit-lamp techniques might you use to examine this patient's cornea?

- A. Direct illumination
- B. Low magnification
- C. Indirect illumination
- D. Diffuse beam

2. What grade would you give to her marginal keratitis?

- A. Grade 1
- B. Grade 2
- C. Grade 3
- D. Grade 4

3. What risk factor may be associated with marginal keratitis in this patient?

- A. High myopia
- B. Overnight wear
- C. Age
- D. All of these

4. Which of the following management options would you be most likely to choose?

- A. Continue lens use but on a daily wear basis
- B. Discontinue lens wear for two weeks before seeing again then, if resolved, refit with 2-weekly daily wear SiHs
- C. Refer urgently for ophthalmological investigation
- D. Discontinue lens wear and prescribe antibiotic drops

Correct answers:

- 1: A. Direct focal illumination with medium/high magnification is the best technique for assessing marginal keratitis.
- 2: B. Grade 2.
- 3: D. All of these are potential risk factors in this patient although the aetiology may be multi-factorial.
- 4: B. In mild cases, infiltrates will often resolve without treatment when lens wear is discontinued. Once resolved, daily wear and more frequent replacement are the most appropriate options, along with improved hygiene.

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FURTHER READING/REFERENCES

Clinical Management Guidelines. Marginal Keratitis. College of Optometrists.

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