

EDUCATIONAL MOMENTS®

How to manage patients with Lid Roughness (Contact Lens Associated Papillary Conjunctivitis or CLPC)

WHAT YOU NEED TO KNOW

Slit Lamp Viewing:

1. Diffuse beam
2. Medium magnification (16x)
3. Direct illumination
- (4) With and without fluorescein

Grading:



- Grade 0: Few vessels on surface; smooth, even conjunctiva
- Grade 1: Small papillae, few vessels on surface, uneven slit lamp surface reflection
- Grade 2: Loss of transparency, small papillae, uneven slit lamp surface reflection
- Grade 3: Papillae with vessels visible
- Grade 4: Papillae with staining and vessels

Incidence:

- Variable time of onset and severity; varies over years with different lenses and care regimens
- 2% RGPs, 2%-15% hydrogel daily wear, 2%-19% hydrogel extended wear, 2%-7% silicone hydrogels (SiHs)
- Significantly reduced since the introduction of frequent replacement CLs
- Increased incidence with EW, non-planned replacement and higher modulus materials (mechanical related)

Aetiology:

- Conjunctival inflammatory condition associated with CLs and trauma
- Immunological response – immediate hypersensitivity (denatured deposits, solution toxicity)
- Mechanical response (lens design or material modulus, prostheses and sutures)
- Associated with atopy and MGD short-term clinical sign of corneal hypoxia – related to oxygen performance of lens

Symptoms:

- Lens awareness, CL intolerance, foreign body sensation, itching which may increase on lens removal
- Mucus formation, visual disturbance (lens dislocation, deposition and mucus)

Signs:

- Papillae (>0.3mm) on upper tarsal conjunctiva with central vascular tuft, mucus discharge, tarsal conjunctival hyperaemia and oedema
- Displaced CL and excessive movement with poor surface wetting and deposits
- Location of Papillae on upper tarsal conjunctiva tends to appear more localised with SiH

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WHAT YOU NEED TO RECOMMEND TO YOUR PATIENTS

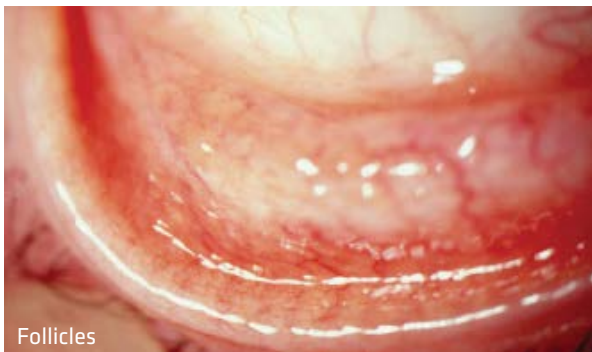
Recommendations:

- Manage if \geq grade 2 or \geq 1 grading interval increase or if patient is symptomatic
- Lens wear can continue if symptoms allow
- Improve lens hygiene (daily surfactant cleaning, change care system to preservative free)
- Increase lens replacement frequency (ideally daily disposable), replace existing lenses
- Alter RGP lens design and/or thickness or use lower modulus soft lens material
- Introduce lid hygiene if signs of lid margin disease
- If severe, temporary cessation lens wear with topical mast cell stabilisers or steroids
- Advice on management of seasonal allergic conjunctivitis

Prognosis:

- Good, especially with frequent replacement lenses, although papillae can remain for months
- Better with early detection – resolves within 2-3 weeks if mechanical, longer if inflammatory cause
- Up to 60% recurrence with SiH EW

Differential Diagnosis:



Follicles

Follicles – vessels on outside. Inferior tarsal conjunctivitis – not CL related.



Vernal conjunctivitis

Vernal conjunctivitis – no vessels (young males, both inferior and upper tarsus).

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 diffuse illumination
- ❖ Click [here](#) for a further reading list and references

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PATIENT CASE STUDY



Patient CB is a 29-year-old management trainee who has worn the same brand of monthly replacement silicone hydrogel lenses since she started wearing contact lenses 8 years ago.

She visits your practice for the first time complaining of severe itching with and without her lenses, 'sticky' eyes and having to remove the lenses after 6 hours' wear.

Quiz:

1. What slit lamp technique would you use to examine this patient's upper lids?

- A. Narrow beam
- B. White light and fluorescein
- C. High magnification
- D. White light only

2. What grade would you give to her lid roughness?

- A. Grade 2.5
- B. Grade 3.0
- C. Grade 3.5
- D. Grade 4.0

3. What material properties are associated with lid roughness?

- A. Lens modulus
- B. Surface characteristics
- C. Lens design
- D. All of these

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

- A. Switch to daily disposable lenses
- B. Refit with RGP lenses
- C. Discontinue lens wear permanently
- D. Continue with these lenses, reduce wearing time

Correct answers:

- 1: B. Evert the lids and use both white light and fluorescein (right), with a diffuse beam and medium magnification.
- 2: C. The patient's lid shows papillae with vessels, and should be recorded grade 3.5 lid roughness.
- 3: D. These material properties are all implicated as contact lens related causative factors in lid roughness
- 4: A. The correct answer is A. Daily disposables may be the best option in this particular case, especially during the hayfever season.

