

# EDUCATIONAL MOMENTS®



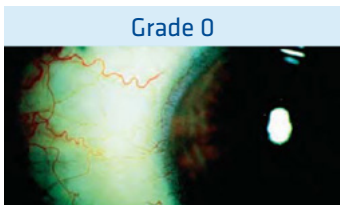
How to manage patients with Bulbar Redness (Bulbar Conjunctival Hyperaemia)

## WHAT YOU NEED TO KNOW

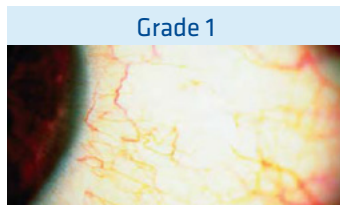
### Slit Lamp Viewing:

1. Diffuse beam
2. Medium magnification (16x)
3. Direct illumination

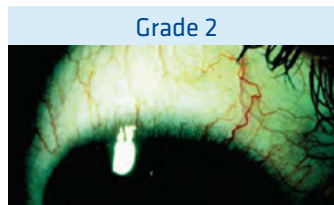
### Grading:



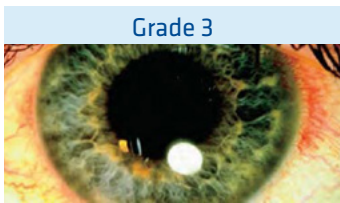
Grade 0



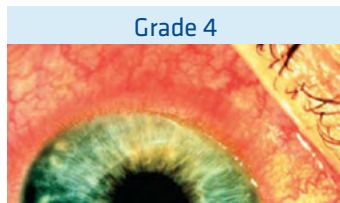
Grade 1



Grade 2



Grade 3



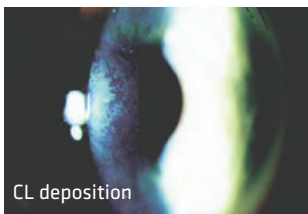
Grade 4

- Grade 0: None
  - Grade 1: Slight injection of conjunctival vessels
  - Grade 2: Mild injection
  - Grade 3: Moderate injection
  - Grade 4: Severe injection
- Position: Superior, nasal, inferior, temporal

### Incidence:

- 15-20 % CL wearers, with 20-35 % clinically significant
- Approximately 15 % non-CL wearers  $\geq$  grade 2

### Aetiology:



- Solution toxicity
- CL deposition (left)
- Dry eye symptomatology
- Pathological dry eye (KCS)
- Allergic reaction
- Infection – MK
- Inflammation – CLARE, CLPU, IK
- Mechanical – poor lens fit, trauma
- Metabolic – Corneal hypoxia, hypercapnia
- Poor general health (especially influenza, throat infection or substance abuse)

### Symptoms:

- May be asymptomatic – depends on cause
- Associated with CL intolerance, dryness, burning and itching

### Signs:

- Bulbar redness can be localised or full coverage
- Amount and pattern depends on lens type: RGP wearers tends to be along horizontal meridian (chronic drying); hydrogel lens wearers' hyperaemia tends to be diffuse

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(Bulbar Conjunctival Hyperaemia)

## WHAT YOU NEED TO RECOMMEND TO YOUR PATIENTS

### Recommendations:

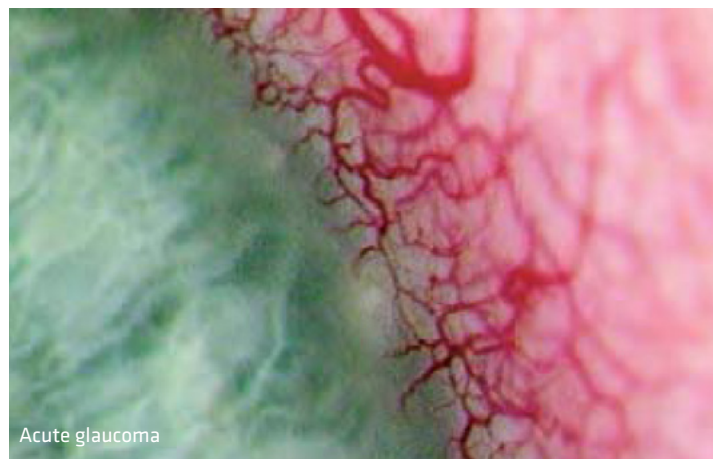
- Manage if  $\geq$  grade 2 or if  $\geq$  1 grading scale increase or if symptoms occur
- Lens wear may continue if symptoms allow
- Remove the cause
- Refit with higher oxygen performance materials
- Change lens material to reduce dryness
- Ocular lubricants

### Prognosis:

Good – although some wearers always exhibit hyperaemic eyes

### Differential diagnosis:

Subconjunctival haemorrhage, conjunctivitis, keratitis, uveitis, acute glaucoma



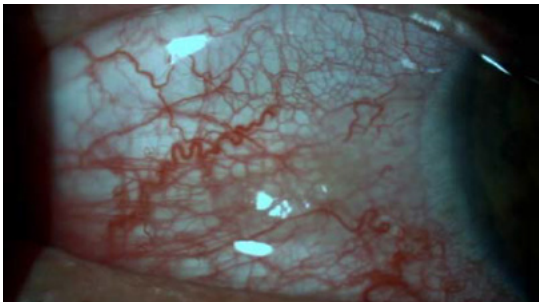
## HOW TO FIND OUT MORE

- Click [here](#) for a general refresher on slit lamp techniques
- Click [here](#) for THE VISION CARE INSTITUTE® clinical grading scales and assessment guide
- Click [here](#) for a further reading list and references

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## How to manage patients with Bulbar Redness (Bulbar Conjunctival Hyperaemia)

### PATIENT CASE STUDY



Patient GC is a 19-year-old university student who has worn daily disposable hydrogel lenses for sports and social use for the past three years.

He wears his lenses 4-5 times a week for football training, matches and social events.

At a routine aftercare appointment he presents with red, slightly sore eyes and reports that he has worn his lenses for the past 36 hours without removal.

#### Quiz:

#### 1. What slit lamp technique would you use to examine this patient's bulbar conjunctiva?

- A. High magnification, narrow beam
- B. Indirect retro illumination
- C. Direct illumination, medium magnification
- D. Specular reflection

#### 2. What grade would you give to his bulbar redness?

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

#### 3. Which of the following techniques is most appropriate to the differential diagnosis of bulbar redness?

- A. Slit lamp examination of the cornea
- B. Keratometry
- C. Over-refraction
- D. Checking lens fit

#### 4. Which of the following management options could you consider?

- A. Emphasise the need to discard lenses daily and never wear them overnight
- B. Confirm spectacle Rx up to date
- C. Re-emphasise the importance of hygiene
- D. All of these options

#### Correct answers:

- 1: C. Using a diffuse beam, 16x magnification and direct illumination is best for examining the bulbar conjunctiva.
- 2: C. The patient's bulbar conjunctiva shows moderate redness and should be graded 3.
- 3: A. Check carefully with high magnification for any corneal involvement such as infiltrative keratitis (right).
- 4: D. If the cornea is not involved, continue lens wear, manage WT and hygiene and ensure spectacles current.

