**CORNEAL ULCERATION**

Renee Carter, DVM, DACVO
Louisiana State University

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**DIAGNOSIS**

- **Simple ulcer**
  - Typically acute
  - May occur in any signalment
  - Distinct edges and/or margins

**DIFFERENTIALS**

- Feline herpes
- Mechanical lesion (eg, entropion, distichia)

**TREATMENT**

- Elizabethan collar
- Topical broad-spectrum antibiotic 3-4 times daily
- ± topical atropine as needed for pain/reflex uveitis*
- ± oral NSAID

- Topical broad-spectrum antibiotic (eg, triple antibiotic ointment or solution [eg, neomycin–polymyxin–bacitracin], fluoroquinolone)
- Topical atropine as needed for pain
- ± bandage contact lens
- ± oral NSAID
- ± topical or oral tetracycline to speed wound healing
- Additional recommended treatment (eg, grid keratotomy, anterior stromal puncture, diamond burr keratotomy) to speed healing
- Recheck in 10-14 days

- Fluorescein negative and patient comfortable?
  - **NO**
    - Repeat cotton tip debridement
    - ± grid keratotomy, anterior stromal puncture, or diamond burr keratotomy
    - Continue medical therapy
  - **YES**
    - Discontinue therapy

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*Atropine should be used with caution in patients with KCS and glaucoma; less atropine is needed when uveitis or complex ulcer is not present.

†Oral tetracyclines are not indicated unless the patient has an upper respiratory infection caused by *Mycoplasma* spp or *Chlamydophila felis*.

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KCS = keratoconjunctivitis sicca
STT = Schirmer tear test

DIAGNOSIS

COMPLEX ULCER

Evaluate for underlying cause of ulceration

Collection samples from lesion edges
- Corneal cytology
- Corneal aerobic culture and susceptibility (± fungal or anaerobic) testing

TREATMENT

- Based on cytology results (pending culture):
  - Rods: Consider aminoglycoside or fluoroquinolone as first-line topical medication
  - Cocci: Consider triple antibiotic as first-line medication
  - Ulcer with infiltrate: Infection should be assumed, even if no bacteria or fungal organisms noted on cytology
- Evaluate previous and/or current medications when choosing topical therapy
- Change drug class if conditions worsen on current medical therapy
- Frequency (eg, 4-12 times daily) of topical medications depends on severity
- Topical serum or plasma drops recommended to treat melting corneal ulcers (eg, corneal malacia) until edges of ulcer become sharply defined
- Elizabethan collar
- Atropine (1-2 times daily), if not contraindicated
- ± oral NSAIDs, if not contraindicated
- Recheck frequently (eg, every 1-3 days)

DIFFERENTIALS

- KCS
- Trauma

Perform STT

ABNORMAL

- Long-lasting topical lubricating ointments or gels
- Topical broad-spectrum antibiotic
- Tear stimulants (eg, cyclosporine) when healed
- Atropine use should be limited
- Weekly rechecks until patient is healed

NORMAL

- Temporary tarsorrhaphy to limit exposure, if needed
- Long-lasting topical lubricating ointments or gels
- Topical broad-spectrum antibiotic
- Treatment of underlying disease process
- Weekly rechecks until patient is healed

DIAGNOSIS

Lagophthalmos

DIFFERENTIALS

- Brachycephalic conformation (bilateral)
- Facial nerve paralysis (often unilateral)
- Exophthalmos (eg, abscess, cellulitis, neoplasia, mucocele, cyst, myositis, salivary gland inflammation) secondary to orbital disease (unilateral)
- Buphthalmos secondary to chronic primary or secondary glaucoma (unilateral or bilateral)

TREATMENT

- Temporary tarsorrhaphy to limit exposure, if needed
- Long-lasting topical lubricating ointments or gels
- Topical broad-spectrum antibiotic
- Treatment of underlying disease process
- Weekly rechecks until patient is healed
**DIFFERENTIALS**

- Nasal fold trichiasis secondary to conformation
- Medial canthal entropion secondary to conformation
- Foreign body behind third eyelid
- Eyelid mass

**DIFFERENTIALS**

- Ectopic cilia
- Distichia
- Entropion
- Eyelid mass

**TREATMENT**

- Surgical correction of eyelid and/or conformational abnormality
- Removal of foreign body or mass, if indicated
- Lubricating broad-spectrum topical antibiotic
- Elizabethan collar
- Recheck after 1 week

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