NHS
Greater Glasgow and Clyde

CLINICAL GUIDELINES

Acanthamoeba Keratitis (Suspected)

A guideline is intended to assist healthcare professionals in the choice of disease-specific treatments.

Clinical judgement should be exercised on the applicability of any guideline, influenced by individual patient characteristics. Clinicians should be mindful of the potential for harmful polypharmacy and increased susceptibility to adverse drug reactions in patients with multiple morbidities or frailty.

If, after discussion with the patient or carer, there are good reasons for not following a guideline, it is good practice to record these and communicate them to others involved in the care of the patient.

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Approval Group:	Ophthalmology Clinical Governance Forum

Important Note:

The Intranet version of this document is the only version that is maintained.
Any printed copies should therefore be viewed as 'Uncontrolled' and as such, may not necessarily contain the latest updates and amendments.

SUSPECTED ACANTHAMOEBA KERATITIS

ALWAYS SUSPECT ACANTHAMOEBA KERATITIS IN ANY CONTACT LENS WEARER WHO PRESENTS WITH A DENDRITIC ULCER+/- SEVERE OCULAR PAIN

History

- Contact lens wear
- Poor contact lens hygiene
- Corneal trauma
- History of swimming with contact lens *in situ*

Disproportionate pain to clinical signs +++

Clinical presentation

- Disproportionate pain to clinical signs +++
- Photophobia

Early stages (epithelial phase):

- Diffuse punctate epitheliopathy
- Dendritic Epithelial lesion

Later stages (Stromal involvement):

- Central grey-white stromal infiltrate
- Central ring infiltrate
- Radial perineuritis
- Limbitis
- Focal/Nodular or Diffuse Scleritis

Diagnosis

High index of clinical suspicion

- *Acanthamoeba PCR has the highest sensitivity*

If Acanthamoeba PCR negative but still high index of clinical suspicion:

- Culture of epithelial corneal scrapings: send Non-nutrient agar with *E Coli* overlay plate
- Send Contact lens and case for M,C and S
- Confocal invivo microscopy: shows cysts
- Lamellar corneal biopsy (advanced cases)
- **Take clinical photos**

Management and prognosis

- Early **diagnosis and prompt treatment** is the **MOST** important prognostic factor
- ADMIT
- AVOID topical steroids!!

Early stages *(If confined to the epithelium or anterior stroma):*

- Epithelial debridement + PHMB 0.02% + Hexamidine 0.1% initially hourly then gradually tapered over 3-4 months

Later stages:

- PHMB 0.02% + Hexamidine 0.1% initially hourly then gradually tapered over 6-12 months
- Treat complications such as scleritis
- Therapeutic Penetrating Keratoplasy if severe stromal melt or impending perforation
- Very high risk of recurrence!

O Erikitola, K Ramaesh, D Lockington, D Anijeet and E MacDonald
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Differentiating Acanthamoeba Keratitis from HSV Keratitis

Clinical features	Acanthamoeba	HSV Keratitis
Epitheliopathy pattern	Non-contiguous/multifocal pattern of granular epitheliopathy	Contiguous, dendritic pattern
Pain	Disproportionately severe pain (secondary to perineurial inflammation)	Mild pain and hypoesthesia due to CNV_3 involvement
Risk factors	Risk factors such as CL wearer or exposure to contaminated freshwater	-
Treatment with Antivirals	Failure to respond to initial antiviral therapy	Responds to antiviral therapy

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