STERILE KERATITIS

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Hypersensitivity blepharo-kerato-conjunctivitis in children

Rosacea keratoconjunctivitis

Rheumatoid corneal melting

Hypersensitivity blepharo-kerato-conjunctivitis (BKC)

Symptoms

- redness
- photophobia
- discharge
- rubbing eyes
- watering
- pain

Typical features

- Asian ethnicity
- age at onset 2-5 years
- unilateral
- multiple recurrences

Hypersensitivity blepharo-kerato-conjunctivitis (BKC)

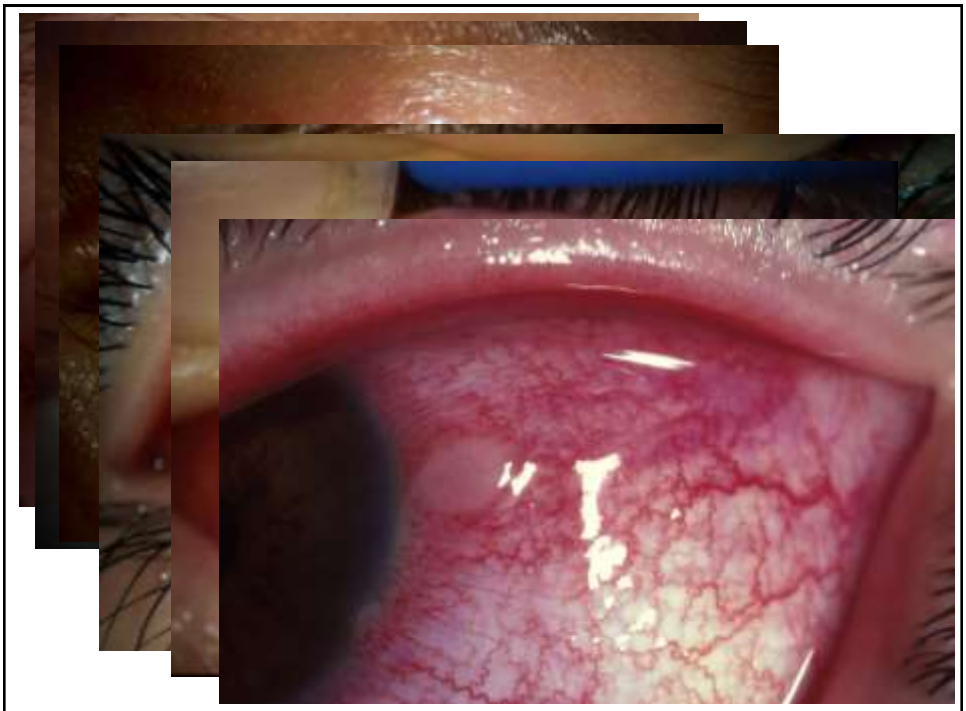
Lid disorders

- blepharitis
- chalazia
- styes / folliculitis

Conjunctival signs

- hyperaemia
- papillary response
- follicular hyperplasia
- bulbar conjunctival phlycten

Lid margin collarettes

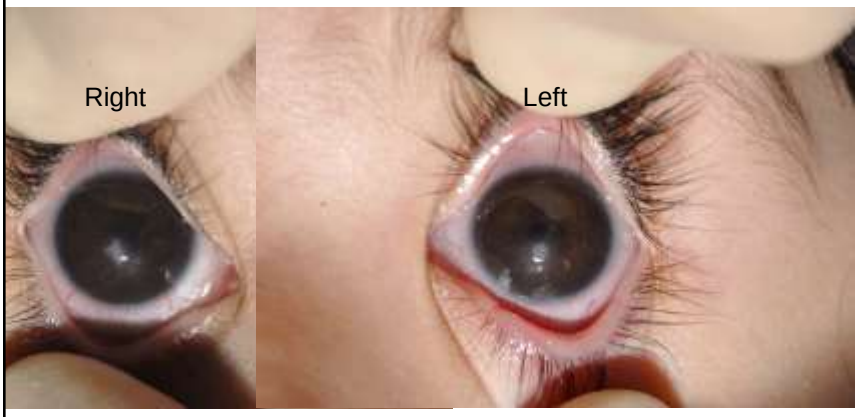


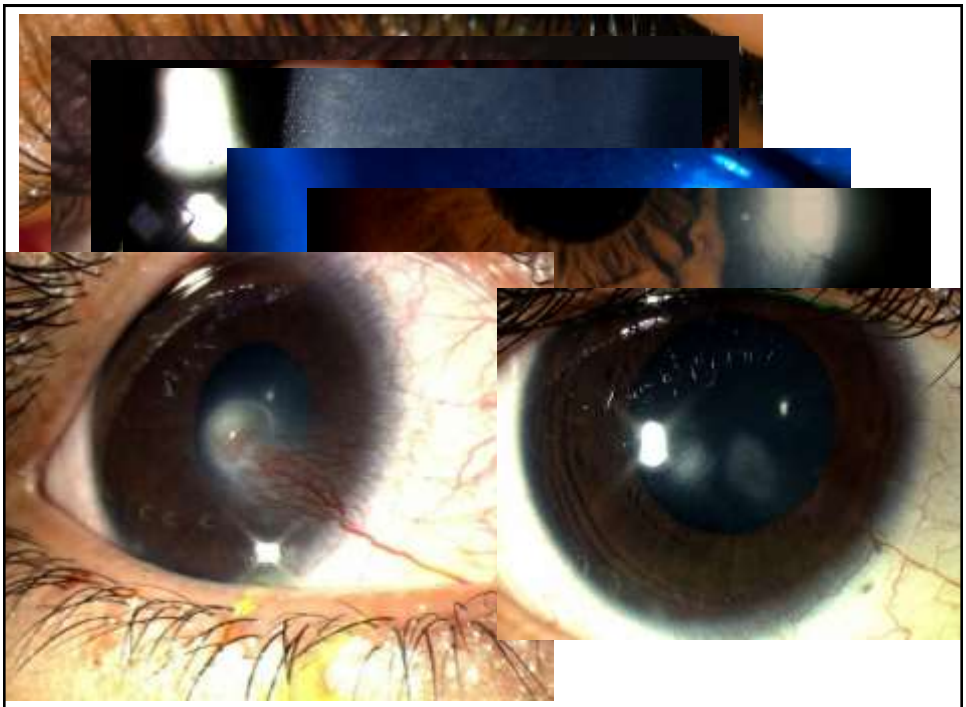
Hypersensitivity blepharo-kerato-conjunctivitis (BKC)

Corneal signs

- marginal infiltrates
- punctate epithelial erosions
- subepithelial infiltrates
- sectoral vascularisation
- circumcorneal vascularisation
- corneal phlyctenule

2 years old. Bilateral keratitis at EUA





Treatment: anterior lid margin disease

- Clean lid margins
  - Remove debris 1-2/day with damp cotton wool bud or lid cleaning pads
- Treat acute infection
  - Topical antibacterial (oc. chloramphenicol) 4/day to lid margins
  - Oral azithromycin or erythromycin (as syrup), 250mg b.d. for 10 days

Treatment: keratitis

- Coarse epitheliopathy and/or marginal keratitis and/or phylctenular keratoconjunctivitis
  - G. fluorometholone 0.1% 4/day for 1 week, vary frequency as required
  - Increase steroid to dexamethasone as required
  - Erythromycin (syrup or tablets) if <12 y
    doxycyline if >12 y
- New therapy (in UK)
  - Topical azithromycin 1% (Azyter) 2/day for 3 days per week

Long term control of blepharitis with keratoconjunctivitis

- maintain long term lid hygiene – analogy with dental hygiene
- long term oral antibiotics i.e. 10 months on and 2 months off
- long term weak steroids for months or years
- consider long term topical azithromycin 1%
- long term prognosis excellent in most
- priority to avoid axial corneal scarring

Hypersensitivity blepharo-kerato-conjunctivitis (BKC)

Differential diagnosis in childhood and discriminating features

Allergic keratoconjunctivitis: no because …

General absence of atopic disorders
History of chalazia
Follicular response if present
Pattern of keratopathy

HSV keratitis: no because …

Conjunctiva and lid signs

Chronic recurrent BKC

- Common cause of unilateral keratopathy in children
- Diagnosed by clinical features and awareness of the condition
- Treatment evidence base minimal

Viswalingam N et al.
Br J Ophthalmol 2005;89:400

Daniel MC et al. Medical management of blepharokeratoconjunctivitis in children: a Delphi consensus.
J Pediatr Ophthalmol Strabismus 2017;54:156

Rosacea keratoconjunctivitis

- Common cause of keratitis in adults
- Asymmetric or unilateral
- Diagnosis often overlooked: variable skin signs
- Treatment evidence base minimal

Rosacea keratoconjunctivitis

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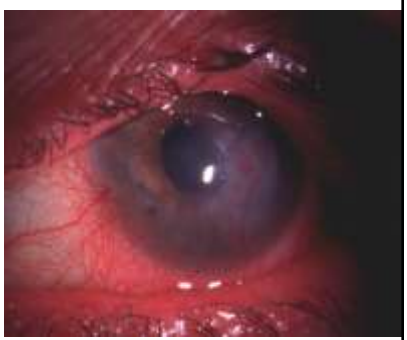
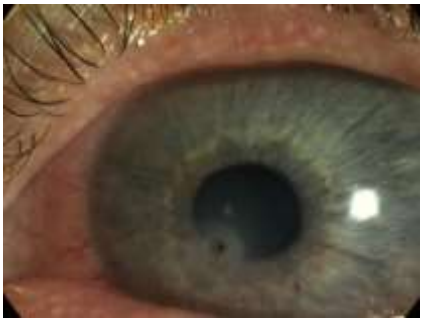
Rosacea keratoconjunctivitis

L cornea 2008

Rosacea keratoconjunctivitis

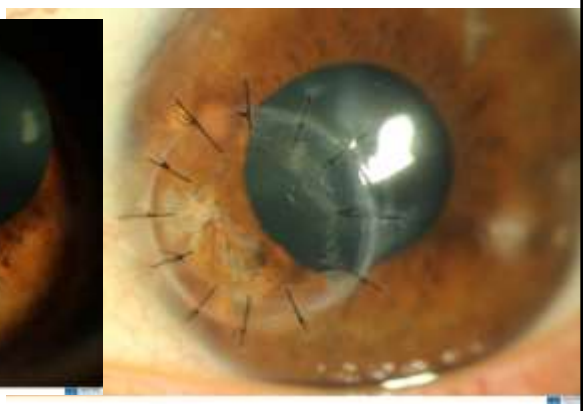


Rosacea keratoconjunctivitis: *Perforation*



Unilateral rosacea keratitis, small diameter perforation
→ glue, contact lens

Rosacea keratoconjunctivitis: *Perforation*



Unilateral rosacea keratitis, perforation → tectonic transplant

Rosacea keratoconjunctivitis: *Perforation*

Minimal cutaneous rosacea,
unilateral rosacea keratitis, perforation
→ tectonic transplant
→ glaucoma tube

Rosacea keratoconjunctivitis: *Management*

- long term oral tetracycline / erythromycin
  tetracycline 250mg BID x 3 months ± 250mg/day long term
  doxycycline 100mg/d x 3 months ± 50mg/d
- weak topical steroid according to keratitis activity signs
- watch for perforation if stromal thinning, vascularisation

OCULAR ROSACEA FROM CHILDHOOD TO ADULT YEARS
Summary

- Variable lid, conjunctiva, cornea signs and severity of involvement
- Unilateral / bilateral
- Potential visual loss due to amblyopia (child) or destructive corneal inflammation (adult)
- Pathogenesis poorly understood by ophthalmologists and dermatologists

RHEUMATOID KERATITIS

Features:

- Advanced seropositive rheumatoid disease (contrast with Wegener's)
- Similar keratitis in other autoimmune collagen disorders
- Corneal stromal melting with/without inflammation

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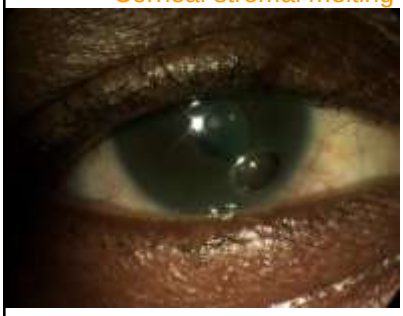

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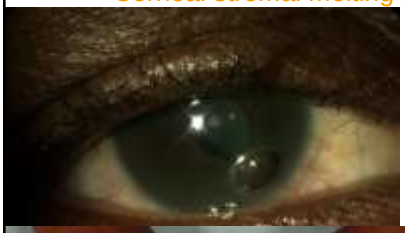
Features:

- Advanced seropositive rheumatoid disease
- Corneal stromal melting with/without inflammation



RHEUMATOID KERATITIS

Management

Patients with corneal ± scleral inflammation

↓

urgent systemic immunosuppression

pulse methylprednisolone
anti-CD20 monoclonal antibody (rituximab)
cyclophosphamide

↓

frequent monitoring of symptoms, keratitis, blood count

Expected outcome of successful therapy is
uninflamed eye with peripheral corneal gutter

RHEUMATOID KERATITIS

Management

Patients without corneal or scleral inflammation

↓

assess depth of stromal thinning
commence intensive topical dexamethasone

↓

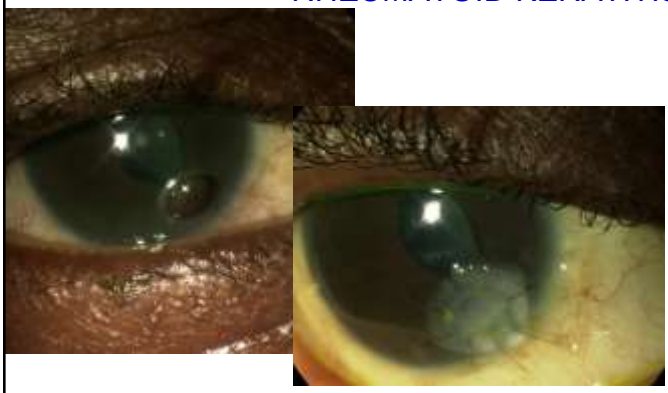
if progressive melting on early review →
systemic immunosuppression

↓

frequent monitoring of stromal thinning

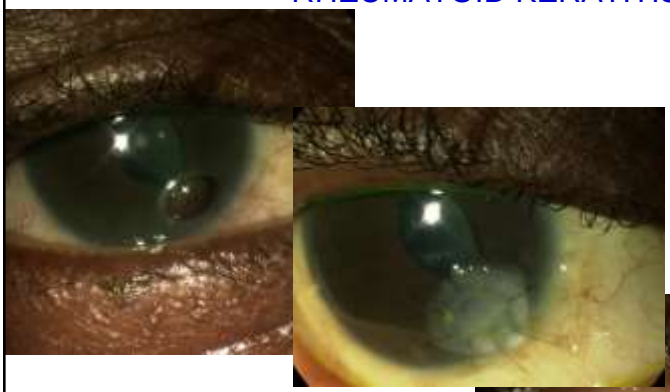
Expected outcome of successful therapy is
uninflamed eye with epithelialised melt

RHEUMATOID KERATITIS



Tectonic transplant

RHEUMATOID KERATITIS



Tectonic transplant

Perforation at transplant edge
glue, contact lens

RHEUMATOID KERATITIS

Management

Patients without corneal or scleral inflammation

↓

assess depth of stromal thinning
commence intensive topical dexamethasone

↓

if progressive melting on early review →
systemic immunosuppression

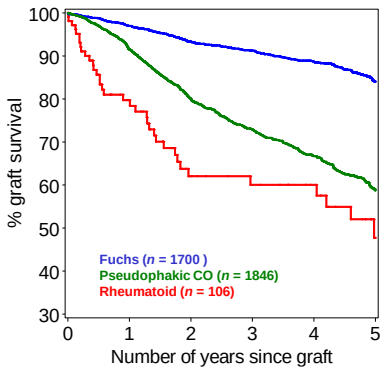
↓

frequent monitoring of stromal thinning

Expected outcome of UNsuccessful therapy is surgery

RHEUMATOID CORNEAL MELTING

survival following corneal transplantation

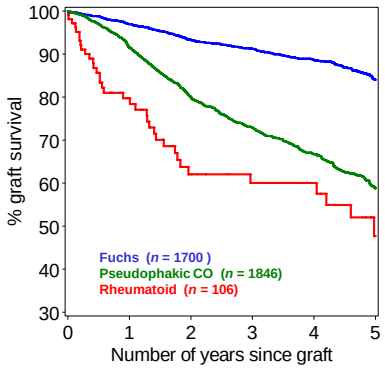


Survival of first PK for rheumatoid corneal melting, Fuchs' and pseudophakic corneal oedema.

5Y graft survival rates (p<0.0001)
48% (95% CI 32-62)
59% (95% CI 56-62)
84% (95% CI 82-86)

RHEUMATOID CORNEAL MELTING

survival following corneal transplantation



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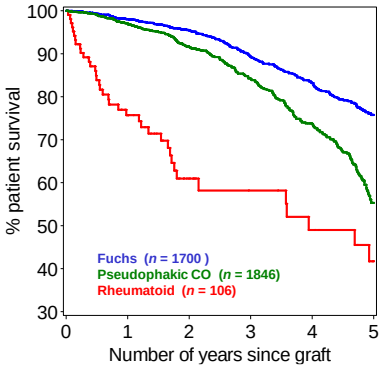

Mortality following first PK for rheumatoid corneal melting, Fuchs' and pseudophakic corneal oedema.

5Y patient survival rates (p<0.0001)
42% (95% CI 26-56)
55% (95% CI 50-60)
76% (95% CI 72-78)

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