

Q

- *Managing **anterior** blepharitis*
 - *Staph disease*
 - maneuver





A

- *Managing **anterior** blepharitis*
 - *Staph disease*
 - **Lid hygiene** (We'll unpack this term later in the slide-set)



Q

- *Managing **anterior** blepharitis*
 - *Staph disease*
 - Lid hygiene
 - Consider to decrease



A

- *Managing **anterior** blepharitis*
 - *Staph disease*
 - Lid hygiene
 - Consider antibiotic ung to decrease bacterial load

(ung = pharmacy-speak for 'ointment')



Q

- *Managing **anterior** blepharitis*

- *Staph disease*

- Lid hygiene

- Consider antibiotic ung to decrease bacterial load

- Consider steroids for the following if present:

- finding on SL exam
- another SL exam finding



A

- *Managing **anterior** blepharitis*
 - *Staph disease*
 - Lid hygiene
 - Consider antibiotic ung to decrease bacterial load
 - Consider steroids for the following if present:
 - Phlyctenules
 - Staph marginal keratitis



Q

- *Managing anterior blepharitis*
 - *Staph disease*
 - Lid hygiene
 - Consider antibiotic ung to
 - Consider steroids for the
 - Phlyctenules
 - **Staph marginal keratitis**

What is the classic clinical appearance of Staph marginal keratitis?



A

- *Managing anterior blepharitis*
 - *Staph disease*
 - Lid hygiene
 - Consider antibiotic ung to
 - Consider steroids for the
 - Phlyctenules
 - **Staph marginal keratitis**

What is the classic clinical appearance of Staph marginal keratitis?
Peripheral focal corneal opacities with an intervening clear space between the lesion and the limbus



Q

- *Managing anterior blepharitis*
 - *Staph disease*
 - Lid hygiene
 - Consider antibiotic ung to
 - Consider steroids for the
 - Phlyctenules
 - **Staph marginal keratitis**

What is the classic clinical appearance of Staph marginal keratitis?

Peripheral focal corneal opacities with an intervening clear space between the lesion and the limbus

Do they tend to be in a particular portion of the cornea?



A

- *Managing anterior blepharitis*

- *Staph disease*

- Lid hygiene

- Consider antibiotic ung to

- Consider steroids for the

- Phlyctenules

- **Staph marginal keratitis**

What is the classic clinical appearance of Staph marginal keratitis?

Peripheral focal corneal opacities with an intervening clear space between the lesion and the limbus

Do they tend to be in a particular portion of the cornea?

Yes, the inferior portion



Q

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- Consider antibiotic ung to

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- **Staph marginal keratitis**

What is the classic clinical appearance of Staph marginal keratitis?

Peripheral focal corneal opacities with an intervening clear space between the lesion and the limbus

Do they tend to be in a particular portion of the cornea?

Yes, the inferior portion

Are they ulcers crawling with S aureus bugs?



A

- *Managing anterior blepharitis*

- *Staph disease*

- Lid hygiene

- Consider antibiotic ung to

- Consider steroids for the

- Phlyctenules

- **Staph marginal keratitis**

What is the classic clinical appearance of Staph marginal keratitis?

Peripheral focal corneal opacities with an intervening clear space between the lesion and the limbus

Do they tend to be in a particular portion of the cornea?

Yes, the inferior portion

Are they ulcers crawling with S aureus bugs?

No, they are sterile inflammatory infiltrates



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 - Consider antibiotic ung to decrease bacterial load
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 - *Staph disease*
 - Lid hygiene
 - Consider antibiotic ung to decrease bacterial load
 - Consider steroids for the following if present:
 - Phlyctenules
 - Staph marginal keratitis
 - *Seborrheic disease*



Q

- *Managing **anterior** blepharitis*

- *Staph disease*

- *Hygiene*

Which is the more common cause of anterior blepharitis?

use **bacterial load**
g if present:

- *Staph marginal keratitis*

- *Seborrheic disease*



A

- *Managing anterior blepharitis*

- **Staph disease**

- **↑ hygiene**

Which is the more common cause of anterior blepharitis?

Staph

use **bacterial load**
g if present:

- **Staph marginal keratitis**

- *Seborrheic disease*



Q

- *Managing anterior blepharitis*

- **Staph disease**

- **Hygiene**

Which is the more common cause of anterior blepharitis?

Staph

Which staph species is the most common culprit?

- **Staph marginal keratitis**

- *Seborrheic disease*

use **bacterial load**

g if present:



A

- *Managing anterior blepharitis*

- **Staph disease**

- **Hygiene**

Which is the more common cause of anterior blepharitis?

Staph

Which staph species is the most common culprit?

S aureus

- **Staph marginal keratitis**

- *Seborrheic disease*

use **bacterial load**

g if present:



Q

- *Managing **anterior** blepharitis*

- *Staph disease*

- Lid hygiene

- Consider antibiotic ung to decrease bacterial load

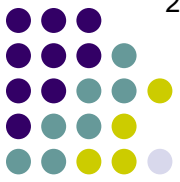
- Consider steroids for the following if present:

- Phlyctenules

- Staph marginal keratitis

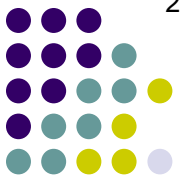
- *Seborrheic disease*

- maneuver/goal



A

- *Managing **anterior** blepharitis*
 - *Staph disease*
 - Lid hygiene
 - Consider antibiotic ung to decrease bacterial load
 - Consider steroids for the following if present:
 - Phlyctenules
 - Staph marginal keratitis
 - *Seborrheic disease*
 - Lid hygiene



Q

- *Managing anterior blepharitis*
 - *Staph disease*
 - Lid hygiene
 - Consider antibiotic ung to decrease bacterial load
 - Consider steroids for the following if present:
 - Phlyctenules
 - Staph marginal keratitis
 - *Seborrheic disease*
 - Lid hygiene
 - Consider a brief course of med



A

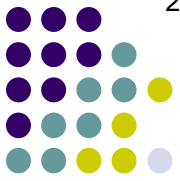
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- *Staph disease*

- Lid hygiene
- Consider antibiotic ung to decrease bacterial load
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 - Staph marginal keratitis

- *Seborrheic disease*

- Lid hygiene
- Consider a brief course of steroids



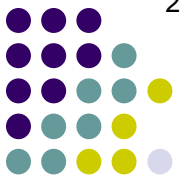
Q

- *Managing anterior blepharitis*
 - *Staph disease*
 - Lid hygiene
 - Consider antibiotic ung to decrease bacterial load
 - Consider steroids for the following if present:
 - Phlyctenules
 - Staph marginal keratitis
 - *Seborrheic disease*
 - Lid hygiene
 - Consider a brief course of steroids
 - Treat concurrent location (non-eye) disease



A

- *Managing anterior blepharitis*
 - *Staph disease*
 - Lid hygiene
 - Consider antibiotic ung to decrease bacterial load
 - Consider steroids for the following if present:
 - Phlyctenules
 - Staph marginal keratitis
 - *Seborrheic disease*
 - Lid hygiene
 - Consider a brief course of steroids
 - Treat concurrent scalp disease



Q

- *Managing anterior blepharitis*

- *Staph disease*

- Lid hygiene
- Consider antibiotic ung to decrease bacterial load
- Consider steroids for the following if present:
 - Phlyctenules
 - Staph marginal keratitis

- *Seborrheic disease*

- Lid hygiene
- Consider a brief course of steroids
- Treat concurrent scalp disease
- Treat abb. component if present



A

- *Managing anterior blepharitis*
 - *Staph disease*
 - Lid hygiene
 - Consider antibiotic ung to decrease bacterial load
 - Consider steroids for the following if present:
 - Phlyctenules
 - Staph marginal keratitis
 - *Seborrheic disease*
 - Lid hygiene
 - Consider a brief course of steroids
 - Treat concurrent scalp disease
 - Treat MGD component if present



- *Managing **posterior** blepharitis*



Q

- *Managing posterior blepharitis*
 - *MGD*
 - maneuver (*and goal!*)



A

- *Managing **posterior** blepharitis*
 - *MGD*
 - Lid hygiene



Q

- *Managing **posterior** blepharitis*
 - *MGD*
 - Lid hygiene
 - Consider PO med if response to above is inadequate



A

- *Managing **posterior** blepharitis*

- *MGD*

- Lid hygiene
 - Consider PO doxy if response to above is inadequate
- (doxycycline)



Q

- *Managing posterior blepharitis*
 - *MGD*
 - Lid hygiene
 - Consider PO **doxy** if response to above is inadequate

How does doxy ameliorate MGD?



A

- *Managing posterior blepharitis*
 - *MGD*
 - Lid hygiene
 - Consider PO **doxy** if response to above is inadequate

How does doxy ameliorate MGD?

Doxy normalizes meibum production by blocking bacterial lipase activity. It also protects the ocular surface by inhibiting matrix metalloprotease (MMP) activity. Its antibiotic effects are probably only minimally contributory.



Q

- *Managing **posterior blepharitis***
 - *MGD*
 - Lid hygiene
 - Consider PO doxy if response to above is inadequate
 - Consider topical med



A

- *Managing **posterior blepharitis***
 - *MGD*
 - Lid hygiene
 - Consider PO doxy if response to above is inadequate
 - Consider topical steroids



Q

- *Managing posterior blepharitis*
 - *MGD*
 - Lid hygiene
 - Consider PO doxy if response to above is inadequate
 - Consider topical steroids
 - *Rosacea*
 - PO med



A

- *Managing posterior blepharitis*
 - *MGD*
 - Lid hygiene
 - Consider PO doxy if response to above is inadequate
 - Consider topical steroids
 - *Rosacea*
 - PO doxy



Q

- *Managing posterior blepharitis*
 - *MGD*
 - Lid hygiene
 - Consider PO doxy if response to above is inadequate
 - Consider topical steroids
 - *Rosacea*
 - PO doxy
 - same maneuver/goal



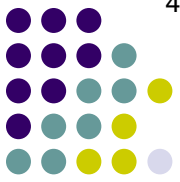
A

- *Managing posterior blepharitis*
 - *MGD*
 - Lid hygiene
 - Consider PO doxy if response to above is inadequate
 - Consider topical steroids
 - *Rosacea*
 - PO doxy
 - Lid hygiene



Q

- *Managing posterior blepharitis*
 - *MGD*
 - Lid hygiene
 - Consider PO doxy if response to above is inadequate
 - Consider topical steroids
 - *Rosacea*
 - PO doxy
 - Lid hygiene
 - Consider a brief course of steroids if sterile abb. present



A

- *Managing posterior blepharitis*

- *MGD*

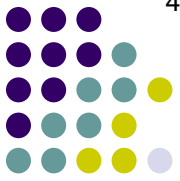
- Lid hygiene
- Consider PO doxy if response to above is inadequate
- Consider topical steroids

- *Rosacea*

- PO doxy
- Lid hygiene
- Consider a brief course of steroids if sterile PUK present

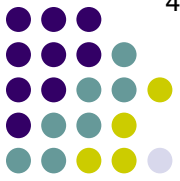
(peripheral ulcerative keratitis)





Q

- *Managing posterior blepharitis*
 - *MGD*
 - Lid hygiene
 - Consider PO doxy if response to above is inadequate
 - Consider topical steroids
 - *Rosacea*
 - PO doxy
 - Lid hygiene
 - Consider a brief course of steroids if sterile PUK present
 - But avoid steroid if cornea is significantly bad change

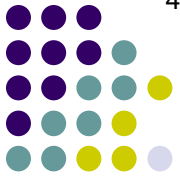


A

- *Managing posterior blepharitis*
 - *MGD*
 - Lid hygiene
 - Consider PO doxy if response to above is inadequate
 - Consider topical steroids
 - *Rosacea*
 - PO doxy
 - Lid hygiene
 - Consider a brief course of steroids if sterile PUK present
 - But avoid steroid if cornea is significantly thinned



- *Managing **demodex** blepharitis*



Q

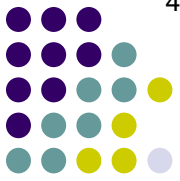
- *Managing demodex blepharitis*
 - But first: *What is demodex?* The hair follicle

type of bug



A

- *Managing **demodex** blepharitis*
 - But first: *What is demodex?* The hair follicle **mite**



Q

- *Managing demodex blepharitis*
 - But first: *What is demodex?* The hair follicle **mite**
 - What are its *anterior* blepharitis signs?
 - Produces **classic description** on the lashes



A

- *Managing demodex blepharitis*
 - But first: *What is demodex?* The hair follicle mite
 - What are its *anterior* blepharitis signs?
 - Produces sleeves on the lashes



Q

- *Managing demodex blepharitis*
 - But first: *What is demodex?* The hair follicle mite
 - What are its *anterior* blepharitis signs?
 - Produces sleeves on the lashes
 - Increased lash brittleness →



A

- *Managing demodex blepharitis*
 - But first: *What is demodex?* The hair follicle **mite**
 - What are its *anterior* blepharitis signs?
 - Produces **sleeves** on the lashes
 - Increased lash brittleness → **madarosis**



Q

- **Managing *demodex* blepharitis**
 - But first: *What is demodex?* The hair follicle **mite**
 - What are its *anterior* blepharitis signs?
 - Produces **sleeves** on the lashes
 - Increased lash brittleness → **madarosis**
 - What is the mechanism of its *posterior* blepharitis?
 - **eew!** → gland plugging → **type of →** MGD



A

- *Managing demodex blepharitis*
 - But first: *What is demodex?* The hair follicle mite
 - What are its *anterior* blepharitis signs?
 - Produces sleeves on the lashes
 - Increased lash brittleness → madarosis
 - What is the mechanism of its *posterior* blepharitis?
 - Mite feces → gland plugging → obstructive MGD



Q

- **Managing *demodex* blepharitis**
 - But first: *What is demodex?* The hair follicle **mite**
 - What are its *anterior* blepharitis signs?
 - Produces **sleeves** on the lashes
 - Increased lash brittleness → **madarosis**
 - What is the mechanism of its *posterior* blepharitis?
 - **Mite feces** → gland plugging → **obstructive** MGD
 - Can lead to **MGD sequelae**



A

- *Managing demodex blepharitis*
 - But first: *What is demodex?* The hair follicle **mite**
 - What are its *anterior* blepharitis signs?
 - Produces **sleeves** on the lashes
 - Increased lash brittleness → **madarosis**
 - What is the mechanism of its *posterior* blepharitis?
 - **Mite feces** → gland plugging → **obstructive** MGD
 - Can lead to **chalazia**



Q

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 - But first: *What is demodex?* The hair follicle **mite**
 - What are its *anterior* blepharitis signs?
 - Produces **sleeves** on the lashes
 - Increased lash brittleness → **madarosis**
 - What is the mechanism of its *posterior* blepharitis?
 - **Mite feces** → gland plugging → **obstructive** MGD
 - Can lead to **chalazia**
 - Treatment
 - Lid scrubs with **two words** or **three words**



A

- **Managing *demodex* blepharitis**
 - But first: *What is demodex?* The hair follicle **mite**
 - What are its *anterior* blepharitis signs?
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 - Can lead to **chalazia**
 - Treatment
 - Lid scrubs with **baby shampoo** or **tea tree oil**



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 - Increased lash brittleness → **madarosis**
 - What is the mechanism of its *posterior* blepharitis?
 - **Mite feces** → gland plugging → **obstructive** MGD
 - Can lead to **chalazia**
 - Treatment
 - Lid scrubs with **baby shampoo** or **tea tree oil**
 - E'mycin ung (probably **mechanism of action**)

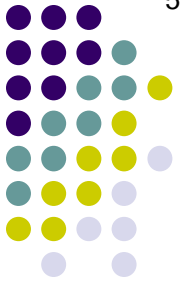


A

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 - What are its *anterior* blepharitis signs?
 - Produces **sleeves** on the lashes
 - Increased lash brittleness → **madarosis**
 - What is the mechanism of its *posterior* blepharitis?
 - **Mite feces** → gland plugging → **obstructive** MGD
 - Can lead to **chalazia**
 - Treatment
 - Lid scrubs with **baby shampoo** or **tea tree oil**
 - E'mycin ung (probably **smothers mites**)

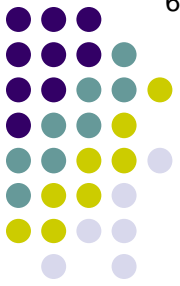
Q

- *What is entailed by 'lid hygiene'?*
 - 1)
 - 2)



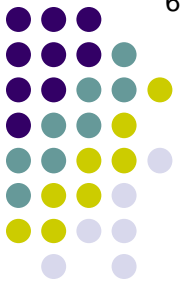
A

- *What is entailed by 'lid hygiene'?*
 - 1) Eyelid margin scrubs +/- baby shampoo
 - 2) Warm compresses



Q

- *What is entailed by 'lid hygiene'?*
 - 1) Eyelid margin scrubs **+/- baby shampoo**



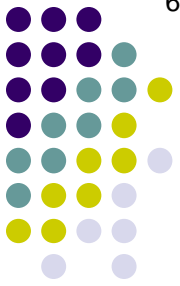
Some authorities reject the use of baby shampoo or other detergents in managing MGD. Why?

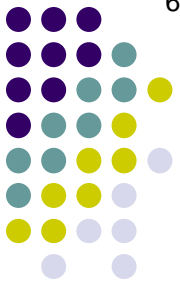
A

- *What is entailed by 'lid hygiene'?*

1) Eyelid margin scrubs **+/- baby shampoo**

*Some authorities reject the use of baby shampoo or other detergents in managing MGD. Why? Detergents are *emulsifiers*—substances that allow lipids and aqueous solutions to interact. The concern is that baby shampoo will emulsify the meibum, thereby facilitating its migration through the aqueous layer and subsequent contamination of the mucin layer. These authorities recommend scrubs be performed with professional eyelid-margin cleansing solutions, or water.*

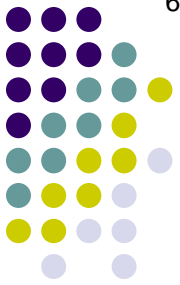




Q

- *What is entailed by 'lid hygiene'?*
 - 1) Eyelid margin scrubs +/- baby shampoo
 - 2) **Warm compresses**

What's the purpose of the warm compresses?

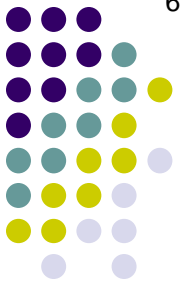


A

- *What is entailed by 'lid hygiene'?*
 - 1) Eyelid margin scrubs +/- baby shampoo
 - 2) **Warm compresses**

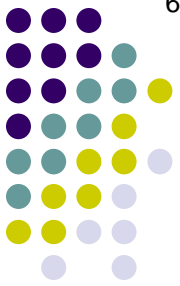
What's the purpose of the warm compresses?

Recall that in MGD, the melting point of the altered meibum is elevated, and therefore the MG secretions may not be fluid at body temperature. The result: hardened MG secretions often obstruct the MG orifices. By raising the local ambient temperature, warm compresses are an attempt to soften these abnormal secretions in hopes of resolving MG obstruction and thereby restoring meibum flow.



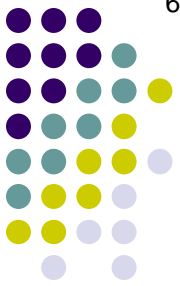
Q

- *What is entailed by 'lid hygiene'?*
 - 1) Eyelid margin scrubs +/- baby shampoo
 - 2) Warm compresses
- *What are the drawbacks to long-term topical steroid use?*
 - 1)
 - 2)
 - 3)



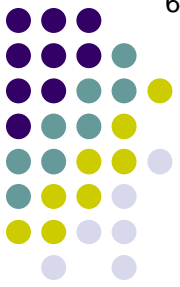
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- *What is entailed by 'lid hygiene'?*
 - 1) Eyelid margin scrubs +/- baby shampoo
 - 2) Warm compresses
- *What are the drawbacks to long-term topical steroid use?*
 - 1) Elevated IOP
 - 2) Cataract formation
 - 3) Increased risk of superinfection



Q

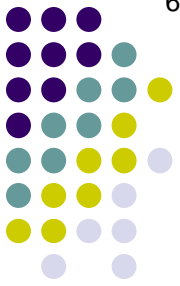
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 - 2) Cataract formation
 - 3) Increased risk of superinfection
- *What topical 'anti-inflammatory' can be used long-term that does not carry these risks?*



A

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 - 2) Cataract formation
 - 3) Increased risk of superinfection
- *What topical 'anti-inflammatory' can be used long-term that does not carry these risks?*

Cyclosporine (Restasis)



Q

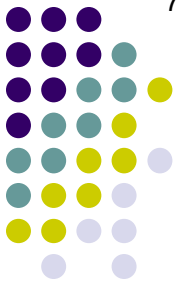
- *What is entailed by 'lid hygiene'?*
 - 1) Eyelid margin scrubs +/- baby shampoo
 - 2) Warm compresses

Why is anti-inflammatory in 'hedge quotes'?

- *What are the risks of topical corticosteroids?*
 - 1) Elevated intraocular pressure
 - 2) Cataracts
 - 3) Increased risk of superinfection

- *What topical **'anti-inflammatory'** can be used long-term that does not carry these risks?*

Cyclosporine (Restasis)



A

- *What is entailed by 'lid hygiene'?*

1) Eyelid margin scrubs +/- baby shampoo

2) Warm compresses

Why is anti-inflammatory in 'hedge quotes'?

Because while cyclosporine does downregulate inflammation, it is not, strictly speaking, an anti-inflammatory compound

- *What are the risks of topical steroids?*

steroids

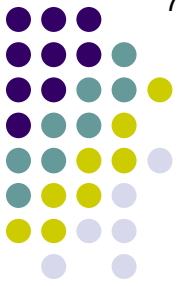
1) Elevated IOP

2) Cataracts

3) Increased risk of superinfection

- *What topical **'anti-inflammatory'** can be used long-term that does not carry these risks?*

Cyclosporine (Restasis)



Q

- *What is entailed by 'lid hygiene'?*

1) Eyelid margin scrubs +/- baby shampoo

2) Warm compresses

- *What is the proper classification of cyclosporine?*

Why is anti-inflammatory in 'hedge quotes'?
Because while cyclosporine does downregulate inflammation, it is not, strictly speaking, an anti-inflammatory compound

steroid

OK then, what is the proper classification of cyclosporine?

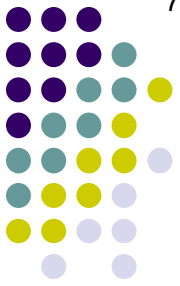
1) Elevated IOP

2) Cataracts

3) Increased risk of superinfection

- *What topical **'anti-inflammatory'** can be used long-term that does not carry these risks?*

Cyclosporine (Restasis)



A

- *What is entailed by 'lid hygiene'?*
 - 1) Eyelid margin scrubs +/- baby shampoo
 - 2) Warm compresses

Why is anti-inflammatory in 'hedge quotes'?

Because while cyclosporine does downregulate inflammation, it is not, strictly speaking, an anti-inflammatory compound

- *What are the risks of cyclosporine?*

steroids

OK then, what is the proper classification of cyclosporine?

It is an immunosuppressant

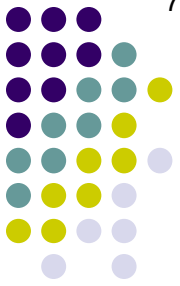
1) Elevated blood pressure

2) Cataracts

3) Increased risk of superinfection

- *What topical **'anti-inflammatory'** can be used long-term that does not carry these risks?*

Cyclosporine (Restasis)



Q

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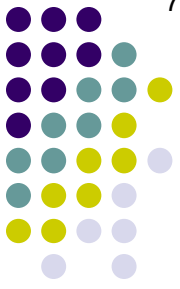
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Broadly speaking, what does it do, and how does it help?

2) Cata

It inhibits T-cell activation, thereby blocking those aspects of the inflammatory process mediated by these cells

3) Increased risk of superinfection

- *What topical **'anti-inflammatory'** can be used long-term that does not carry these risks?*

Cyclosporine (Restasis)