

DO YOU WANT STEROIDS WITH THAT?

NO DISCLOSURES

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University Eye Institute

RULE #1

- **UNDERSTAND THAT ALL TREATMENTS HAVE SOME RISK**
- **KNOW RISK VS BENEFIT OF THERAPY**
- **ALWAYS EVALUATE PATIENTS FOR SIDE-EFFECTS AND ADVERSE EFFECTS OF THERAPY**

RULE # 2

- **YOU MUST HAVE A DIAGNOSIS BEFORE YOU TREAT**
- **TREATMENT IS EASY
DIAGNOSIS IS TOUGH**

RULE #3

- **TREAT MECHANISMS, NOT NAMES.**
- **RECOGNIZE PRESENCE OF INFLAMMATION, INFECTION, TRAUMA. THEY CAN EXIST INDIVIDUALLY OR TOGETHER.**

Mechanisms: Know the (6) I's

- **INFECTION**
- **INFLAMMATION**
- **ISCHEMIA**
- **INJURY**
- **IDIOPATHIC**
- **IATROGENIC**

STEROID PHARMACOLOGY

- **INDICATIONS?**
- **CONTRAINDICATIONS**
- **SIDE-EFFECTS**
- **ADVERSE EFFECTS**
- **WARNINGS**
- **DOSAGES**
- **DOSAGE FORMS**

INFLAMMATION -THE GOOD

- **The Good**
- Destroy invading pathogens**
- Remove dead tissue**
- Replace damaged tissue with scar tissue-fibrosis**

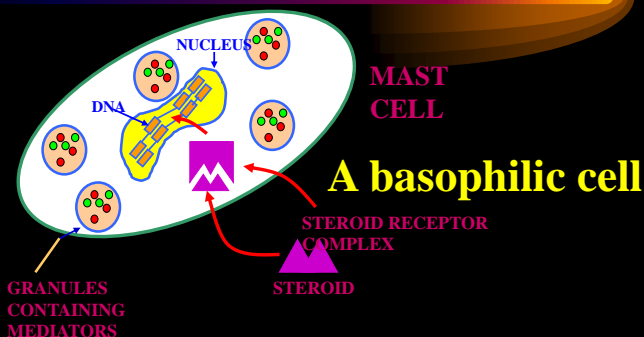
INFLAMMATION-THE BAD

- **The Bad**
- Primary inflammation or inflammation secondary to trauma, infection or autoimmune disorders must be controlled to minimize damage and loss of function ie corneal scarring**
- **Always TX underlying cause of inflammation.**

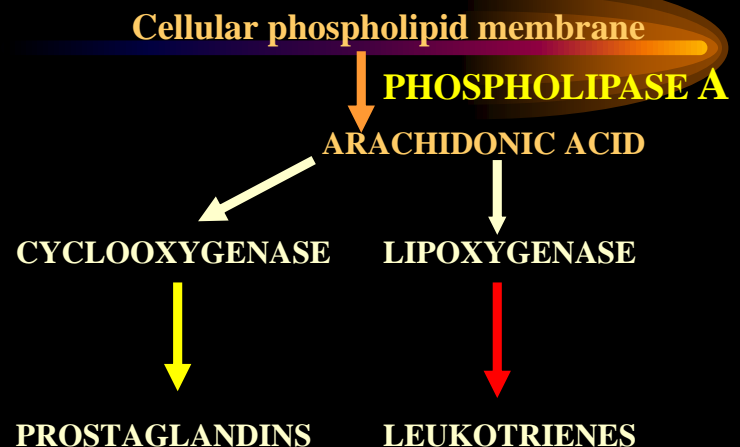
STEROID PHARMACOLOGY

- **Mechanism of action @ @ @ @ @**
- Inhibit EVERYTHING**
- The major cytokines:**
 - leukotrienes and prostaglandins-**
- **Inhibit WBC migration**
- **Inhibit fibroblasts**

Stabilization of the Mast Cell by Modulating Gene Expression*



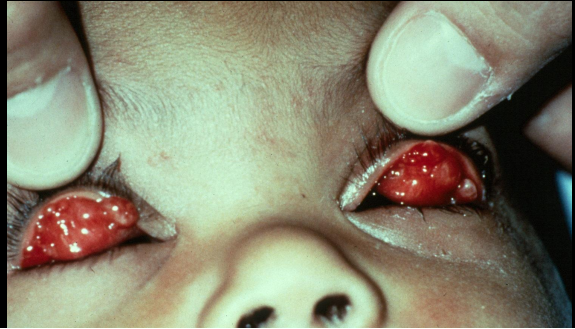
THE INFLAMMATORY CASCADE



REMEMBER :KNOW YOUR ABC's

- **A: Always use**
- **B: use BUT with certain conditions and exceptions**
- **C: Contraindicated-Never use**

Let's start with a KWIK KASE
21 days old, bilateral conjunctivitis
DO YOU WANT STERIODS WITH THAT?



DO YOU WANT STERIODS WITH THAT?

- 1. ALWAYS
- 2. YES, BUT FIRST TX WITH.....
- 3. CONTRAINDICATED

15 Y/O female presents with mom-C/O
red eye X 2 months
DO YOU WANT STERIODS WITH THAT?

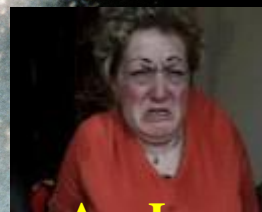
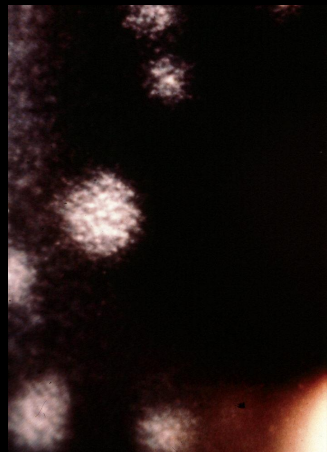
- Has seen one nurse practitioner
- Has seen Two Optometrists
- Tx with Ciloxan
- Tx with Tobradex
- Mom wonders why nobody can cure her daughter



DO YOU WANT STERIODS WITH THAT?

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- 2. YES, BUT FIRST TX WITH.....
- 3. CONTRAINDICATED

STERIODS?



**Am I
GOING
BLIND?**

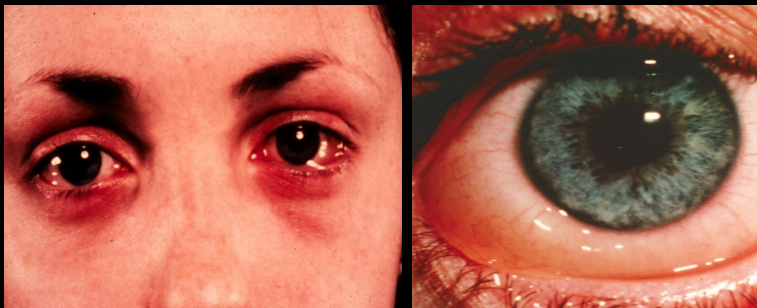
DO YOU WANT STEROIDS WITH THAT?

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- **VIRAL**

**EKC-Subepithelial infiltrates and
pseudomembranes @ @ @ -**
minimize loss of accessory
lacrimal apparatus

Dr. my eyes itch like crazy, started
after I met my boy friends cat



DO YOU WANT STEROIDS WITH THAT?

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- 2. YES, BUT FIRST TX WITH.....
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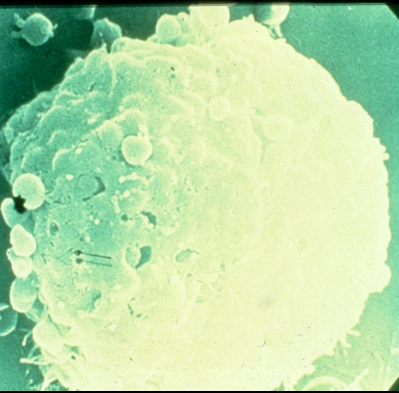
WOW-A CORNEAL ULCER



DO YOU WANT STEROIDS WITH THAT?

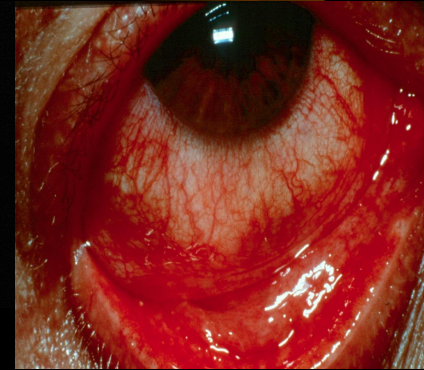
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- 3. CONTRAINDICATED

If There are Eosinophils, It Ain't Simple Allergic Conjunctivitis



- Eosinophils-Nasty little WBC's full of "ACID" (Major basic protein)
- Attracted by release of PAF (platelet activating factor) and ECF (Eosinophilic chemotactic factor)
- Produce permanent tissue changes seen in VKC and GPC

AKC- A PROSTAGLANDIN AND LEUKOTRIENE RESPONSES



TRUE OR FALSE

- All GPC is treated the same?
- GPC is treated by it's severity?
- Doctors of Optometry are experts in grading GPC?
- WHY?
- Because we caused most of it.....



KID #1: BAD GPC



- What did they look like??

hma

LD-

dent



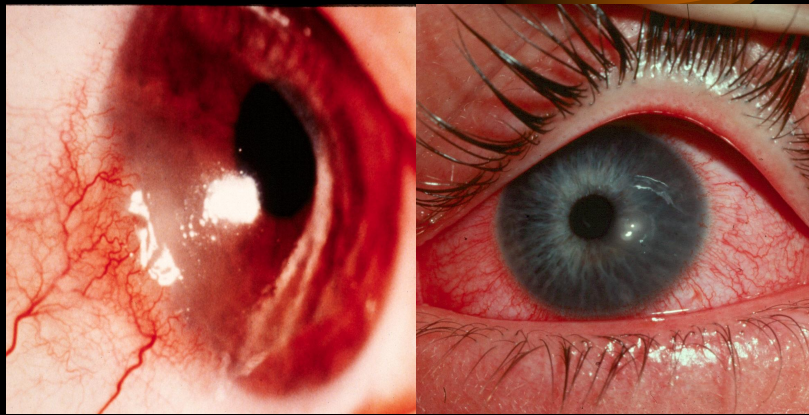
DO YOU WANT STEROIDS WITH THAT?

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DO YOU WANT STEROIDS WITH THAT?

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- 2. YES, BUT FIRST TX WITH.....
- 3. CONTRAINDICATED

DO YOU WANT STEROIDS WITH THIS OR THAT?



DO YOU WANT STEROIDS WITH THESE?

- 1. ALWAYS
- 2. YES, BUT FIRST TX WITH...
- 3. CONTRAINDICATED

A NEW USE FOR DOXYCYCLINE?

Doxycycline inhibition of interleukin-1 in the corneal epithelium.

Solomon A, Rosenblatt M, Li DQ, Liu Z, Monroy D, Ji Z, Lokeshwar BL, Pflugfelder SC

Ocular Surface and Tear Center, Bascom Palmer Eye Institute, Department of Ophthalmology, University of Miami School of Medicine, Florida 33136, USA.

PURPOSE: To evaluate the effect of doxycycline on the regulation of interleukin (IL)-1 expression and activity in human cultured corneal epithelium. MP.

RESULTS: Doxycycline significantly decreased IL-1beta bioactivity in the supernatants from LPS-treated corneal epithelial cultures. These effects were comparable to those induced by the corticosteroid,

CONCLUSIONS: Doxycycline can suppress the steady state amounts of mRNA and protein of IL-beta and decrease the bioactivity of this major inflammatory cytokine. These data may partially explain the clinically observed anti-inflammatory properties of doxycycline. **The observation that doxycycline was equally potent as a corticosteroid, combined with the relative absence of adverse effects, makes it a potent drug for a wide spectrum of ocular surface inflammatory diseases.**

The observation that doxycycline was equally potent as a corticosteroid, combined with the relative absence of adverse effects, makes it a potent drug for a wide spectrum of ocular surface inflammatory diseases.

BACTERIAL

- Staph can produce secondary corneal inflammatory disease
- Marginal ulcers/phlegetenular disease
- Useful in bacterial corneal ulcer management?

DO YOU WANT STEROIDS WITH THAT?

CASE 2

- 1. ALWAYS
- 2. YES, BUT FIRST TX WITH.....
- 3. CONTRAINDICATED

AUTOIMMUNE DISEASE

- Episcleritis
- Scleritis-Underlying systemic disease is common-generally avoid topical steroids
- 4 types of scleritis

Anterior diffuse

Anterior nodular

Necrotizing anterior-97% syst. Dis (Avoid topical steroids-scleral melting) @ @ @ @

Posterior

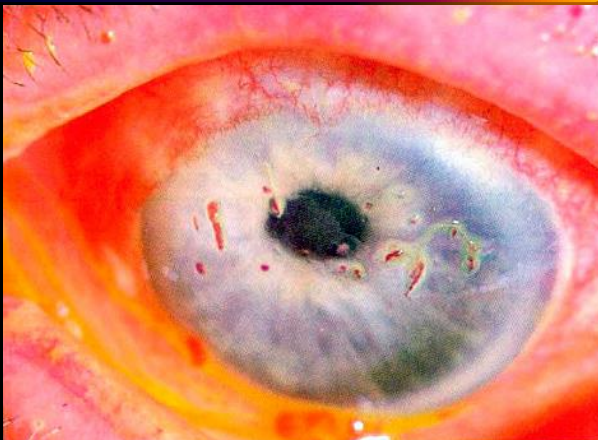
NSAIDS OF COURSE THEY'RE SAFER?

- Only anti-inflammatory in high doses
- Think RK good for -11.00 myope or LASIK
- GI ulceration
- Renal failure
- Congestive heart failure
- All diabetics/No No No
- POOR anti-inflammatory effect

Steroids Are Safer? You must be kidding

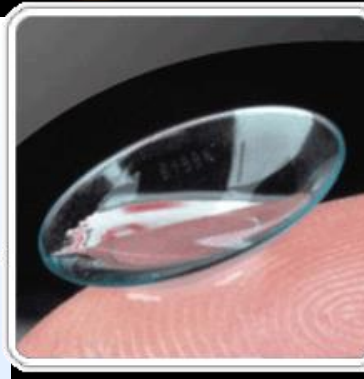
- Extremely effective anti-inflammatory effect
- Safe for short term use if.....
- No GI ulcer
- No psychotic
- No high BP
- No diabetes

DO YOU WANT STEROIDS WITH THAT?



STERIODS? IF NOT, THEN WHAT?

FIRST: HEAL IT Bandage CL 8.4 BC



Second: Keep it healed. Steroids and Dry Eye

- Recognized Inflammatory component to dry eye
- Risk VS Benefit
- “Jump start” Restasis TX

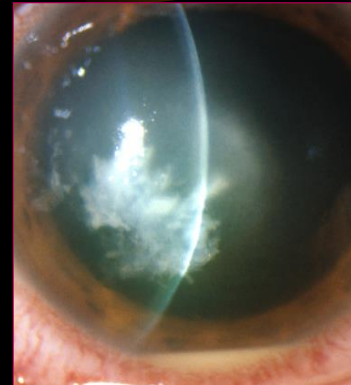
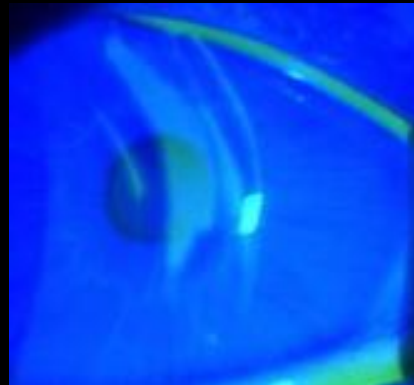
Topical nonpreserved methylprednisolone therapy for keratoconjunctivitis sicca in Sjogren syndrome.

Marsh P, Pflugfelder SC.

Ocular Surface and Tear Center, Bascom Palmer Eye Institute, Department of Ophthalmology, University of Miami School of Medicine, Florida 33136, USA.

CONCLUSIONS: These findings indicate that topical nonpreserved methylprednisolone is an effective treatment option for patients suffering from severe keratoconjunctivitis sicca who continue to experience bothersome eye irritation despite maximum aqueous enhancement therapies. They also suggest that inflammation is a key pathogenic factor in this condition.

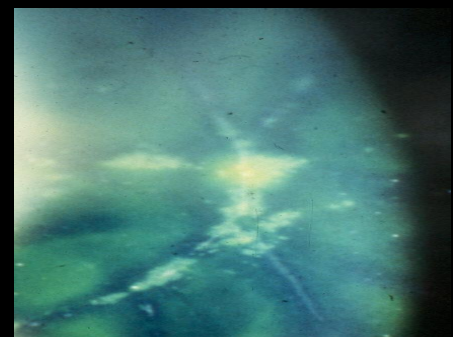
“Got poked with a stick” DO YOU WANT A STEROID WITH THAT?



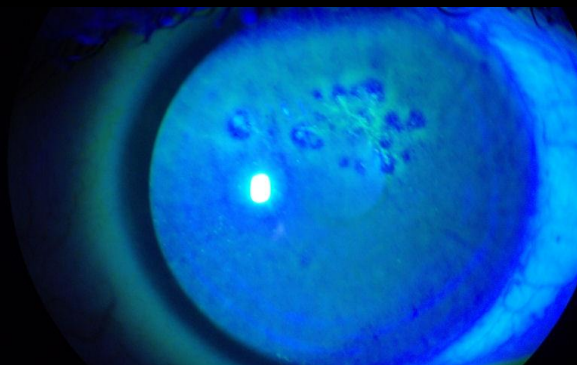
Fungal Keratitis: The Patient at Risk

- Hx of injury from organic material
- “scratched eye with tree branch”, then steroid treated with long term antibiotic/steroid combo
- Immunocompromised-Local vs systemic
- Diabetics/systemic disease
- HIV
- Chemotherapy
- Post-organ transplant
- Oral steroid user

Poked in the eye with a stick #2 DO YOU WANT A STEROID WITH THIS?



CL Overwear? DO YOU WANT STEROIDS WITH THAT?

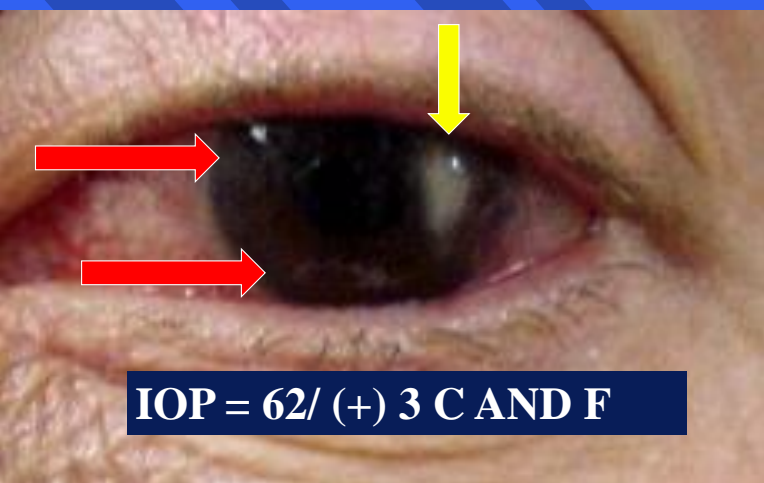


Epithelial herpes is associated with the (2) BIG “I”’s

• Inflammation and Infection



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Stromal H. simplex- A whole new ball game

- Mechanism is primarily inflammation@@@
- Stromal infiltrates are the critical sign
- Balanced use of topical steroid (FML) with anti-viral cover@@@
- Consider oral acyclovir at this point in time



DO YOU WANT STEROIDS WITH THAT?

THE REST OF THE STORY



THANK YOU FOR
YOUR HOSPITALITY