The Greatest Anterior Segment Disease and Contact Lens Complications Course Ever

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Financial Disclosure Form
Dr Jack L. Schaeffer

I Have received Honorarium, compensation, or serve as an advisor to the Following companies

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- Alcon
- Allergan
- AMO/Abbott
- Arctic/Dx
- Aton
- Bausch and Lomb
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I am on the speaker panel for:
Alcon
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Bausch + Lomb
BVI
TearLab

I am a consultant for:
Akorn
Allergan
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Lunovus
OcuSoft
TearLab

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DISCLOSURES. Laura Periman MD

Alcon: C, S, MAB

Allergan: C, S, MAB

Avellino: MAB

Azura: C, MAB

Bausch: PI

Bruder: MAB

Dompe: MAB

Eyedetec: MAB, Shares

Horizon: C, MAB

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Science Based Health: C, S, MAB

Sun: C, S, A

Tarsus: C, A, PI

TearLab: C, MAB

ThermaMEDx: C, A

Visant: C, A, Shares

Dilation Vs Optomap

- The two together delivers a the highest level of Comprehensive Eye Care

- If you have to choose just one:

  DILATE, DILATE, DILATE

Telephone Consultations

30 YO WF

Telephone symptoms:

sore upper lid, painful spot on lid

Internal Hordeolum??

Ready to Dx on telephone: decided to see the patient

Bacterial Conjunctivitis?

Extremely Tender Upper lid

Upper lid swelling

Excessive Mucous production

Bacterial Conjunctivitis
Orbital Cellulitis?

Tx:

PO

Augmentin PO 875 Mg Bid

Ocular

Zymaxid OS q 2 h

Day 2

Facial Pain Headache

Fever

Referral to PCP, R/O Orbital Cellulitis

Dx Severe Sinus infection:

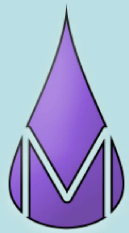
Contd Meds PO (Augmentin)

Antibiotic Injection in office

Sinus infection

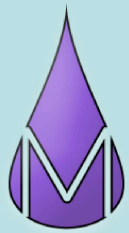
Lid swelling with Pain

- Admitted for pain control and IV antibiotics
- Proptosis, edema and pain with eye movement progressed despite broad spectrum IV antibiotics
- Urgent DCR performed



Chronic Unilateral Conjunctivitis

- 63 yo male with rosacea on chronic doxycycline referred with ‘recurrent eye infections’
- Topical antibiotics would clear symptoms ‘a little’
- Cultures grew out candida species
- Altered ENT microflora with chronic doxycycline



Chronic Chemosis after Blepharoplasty

Lid Disease- Infection

Treatment

- Keflex 500 Mg BID
  - Cephalexin
- Bactrim: double strength: BID
  - Trimethoprim/ Sulfamethoxazol
- Augmetin 875 mg BID
- Miboflow
- Hot compress (Written instructions)

Treatment

- Keflex 500 Mg BID
  - Cephalexin
- Bactrim: double strength: BID
  - Trimethoprim/ Sulfamethoxazol
- Augmetin 875 mg BID
- Miboflow
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Chalazia

Periman IPL Protocol

- Prep: Trader Joe's or Simple micellar make up remover wipes. Commercial eyelid wipes as needed. Proparacaine, PF AFT, sterilized laser-grade corneal shields, thin-medium layer of clear ultrasound gel (take great care to avoid gel getting into eyes), applied with long edge of tongue depressor.

- Step 1: Full face rosacea pass (choose either telangiectasia or erythema based on clinical findings)

- Step 2: Toyos settings tragus to tragus, double pass

- Step 3: Switch to small light guide, treat lids, avoid eyelashes by 2mm, double pass

- Step 4: Aesthetic clean up: angioma (VL presets), facial telangiectasia (VL presets), chalazia etc. For chalazia, stack 3 extra Toyos pulses.

- Post-Procedure: remove gel with long edge of tongue depressor, gauze remove residual (again, take great care no gel gets into eyes), wipe with warm water. Pat into skin one drop Alphagan P mixed with EltaMD or Skin Medica tinted sunscreen. Place 1:16 dilution of Alphagan P in Refresh Mega into eyes.

Canaliculitis/Dacryocystitis

Treatment

- Keflex 500 Mg BID
  - Cephalexin
- Bactrim: double strength: BID
  - Trimethoprim/ Sulfamethoxazol
- Augmetin 875 mg BID
- Hot compress (Written instructions)
- MiBo Flow

Doctor number 3

- 68 YO female
- Pain discomfort 2 years OU
- OD > OS
- 3 rd doctor

- Treatment
- Restasis BID

Concretions Management

- Asymptomatic- neglect (@ 6% become symptomatic
- Symptomatic
  - Fine tipped forceps delivery
  - 25 ga needle
  - Education R.E. recurrence

Allergic Dermatitis

- Elocon
- Mometasone Crème
- Lotemax ung

Rosacea

Eyelash Complications

EyeLash Whiplash

- Hygiene suffers
- Patients don’t want to rub off their expensive extensions

Prostaglandin Analogs in OTC Eyelash Serums

- Aerodynamic compromise
- Upper eyelid discoloration
- MGD*
- Hyperpigmentation
- Dermatitis
- Orbital Fat Atrophy
- Iris Color Change
- CME

“I’ll Look Great Later and No Harm Done”

- MG toxicity from ink pigments
  - Tattoo inks may be made from titanium dioxide, lead, chromium, nickel, iron oxides, ash, carbon black, and other ingredients. Some of the pigments are industrial grade and used as automobile paint
- MG trauma
- Loss of lid margin architecture
- MG dropout
- high SPEED scores

Laura M Periman MD

Trauma / Abrasion

Corneal Abrasion

- Debridement of the Cornea
- Techniques
- Instruments
- Bandage Contact lenses
- Follow up prtocols

Bandage contact lens

- Pros
- Cons
- Cyclo
- Antibiotic
- Nsaids

Follow up protocols

- Day 1
- Day 3
- If any symptoms post day 3
  - Telephone
  - Office visit

- Excessive pain
  - Treatment
  - Bandage
  - Nsaid
  - Narcotics
  - Cycloplegia

- Recurrent erosion
  - Any preventive measures

Recurrent Erosion

Recurrent Erosion

EBMD / ABMD

Case 2

- 50 YOF
- Woke up with discomfort
- Feels like something is in my eye

Case 3

- 50 YO male
- Punched in eye 3 weeks ago
- Ocular Contusion with no abrasions
- Va 20/40

Treatment Strategy

- ABMD
- RCE

Recurrent Corneal Erosion

- NaCl Ung Pm
  - Muro 128
- PF AT
  - Q 1-2 hours
- NaCl Gtts qid

Recurrent Corneal Erosion Long Term Therapy

- Restasis / Xiidra
  - Tid
- Fresh –Kote
  - Qid
- Lacriserts ?
- Hypertonic Vs Hypotonic AT

- Amniotic membrane
  - Corneal specialists – not in favor
  - Any EBM to support
- Which type
  - How long to remain in eye
  - Follow up protocol

Treatment

- Nsaid ?
  - Delayed Corneal healing ?
- Bandage Contact lens
  - Antibiotic??
  - How often
  - RTC daily until healed? How often?
  - Remove and fresh lens and leave in place 3 days?

Recurrent Corneal Erosion

- Bandage Contact lenses
- Antibiotic ung
- Change lens how often
- See patient how often

Developing a Specialty Practice

Cornea Disease

Epidemic Keratoconjunctivitis

RPS Adeno Detector

- Prospective, masked, multi-center clinical trial in U.S. and Europe
- 186 consecutive patients examined all cases of acute conjunctivitis and compared to both cell culture and PCR
- 25% of all acute conjunctivitis confirmed as Adenovirus
- RPS Detector
  - 89% Sensitive vs. 91% Cell Culture
  - 94% Specificity vs. 100% Cell Culture

Treatment EKC

- 1 lubricants
- 2 combo antimicrobial / steriod
- 3 Steroid
- 4 Betadine
- 5 Zirgan

- Contagious ? How long

EKC treatment
Melton/ Thomas

- Povidone- Iodine 5% (betadine)
  - Broad spectrum microbiocide
  - Indicated for "Irrigation of the ocular surface"
  - OFF LABEL USE
    - Anesthetize with proparacaine
    - Instill 1-2 drops NSAID
    - Instill several drops of betadine in eye (close eye)
    - Swap excess over lid margin
    - After one minute irrigate with saline
    - Instill 1-2 drops NSAID
    - Rx Lotemax or Zylet or Tobadex ST qid 4 days
  - No reports of adverse reactions
  - Avoid if allergic to iodine
  - Betadine 5% ophthalmic prep soln (30 ml opaque)
  - 99070 supply code

19yoF Red Eye OD

- Red Eye x 3 days with no pain, today was the first day with irritation
- Recently had Staph infection in leg, off antibiotics less than a week ago (Bactrim)
- VA sc 20/20- OD 20/25 OS

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Treatment

- Zylet qid OD
- RTC 1 day

- Some improvement over the new few days, but minimal.

Treatment

- D/c Zylet qid OD, begin Besivance q1h OD
- Differentials?

Pt showed significant improvement, at 1-day follow up

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Differentials?

- Herpes Simplex Keratitis
- Adenovirus
- Solution Hypersensitvity
- MRSA
  - Remember staph in fection leg treated with Bactrim
  - Nursing student

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Whats Next?

- Diagnosis
- Treatment

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THYGESSONS

Thygessons

- Possible Thygeson's

When all else fails: Thygessons Vs HSV

- Discontinue ALL meds

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Thygeson's SPK

- Described by Phillips Thygeson in 1950
- Slightly elevated corneal lesions, minimal staining
- Usually bilateral, Second to third decade
- Noted corneal sensitivity decreased but not as severe as herpes
- Mild conjunctival involvement, worse with exacerbations
- Appearance similar to EKC described by Fuchs

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Thygeson's SPK

- Lesions in basal epithelial layer / Bowman's layer
- Debris from necrosis / degenerated epi cells
- Increased Langerhans cell density
  - Part of inflammatory response- Type II

Thygeson's SPK Treatment: Anecdotal

- Cyclosporin 2% in olive oil (8 patients)
- Supratarasal injection triamcinolone (1 case-chronic 6+ years)
- Trifluridine (6 eyes)
- PRK in myopic patient had lesions recur in periphery (untreated area) vs central (treated area)
- Rimexolone 1% for reversing dendritic cell density (4 patients)

Thygeson's SPK

- Steroid Use
  - Loteprednol 0.2%, 0.5%
- Cyclosporine 0.05% Long Term

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Back to the case…

- D/c All meds
- Lesions healed in 1 week
- No recurrences since October

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Plaquenil Keratopathy

Vortex Keratopathy or Cornea Verticillata

Clinical features:

- **Symptoms: the corneal changes are rarely of any visual significance.**
- **Signs:**
  - **Symmetric, bilateral, whorl-like pattern of powdery, white, yellow or brown corneal epithelial deposits**
  - **Appears in a vortex fashion in the inferocentral cornea and swirls outwards sparing the limbus**
- **Occurs in Fabry's disease and in patients being treated with a variety of drugs including amiodarone, chloroquine, amodiaquine,**

  meperidine, indomethacin, chlorpromazine and tamoxifen.

Ocular Surface Disease Secondary to Systemic Disease

Herpes Zoster Management

- Oral antiviral agent
  - Zovirax (acyclovir) 800 mg 5x / day x 7-10 days
  - Famvir (famciclovir) 500 mg tid x 7-10 days
  - Valtrex (valacylovir) 1000 mg tid x 7-10 days
  - Discussed with nephrologist / PCP if renal disease present

Ocular findings:

- Conjunctivitis/Scleritis
- Pseudodendrites
- Neurotrophic keratitis
- Iritis
- Glaucoma
- ION, vein or artery occlusion
- Nerve Palsy

Iridocyclitis and HZO

- Most common and most often overlooked ocular complication (43%)
- Highly elevated IOP
- Study by Thean, Hall & Stawall -*clinical Ophthalmology Dec 2001*
- 56% of patients developed glaucoma!!

Treatment:

- Duration?

- 7 days for most patients although newer studies (Zaal - Am J or Ophthal. Jan 2001) suggest
- 10 days for patients over age 66 due to shedding

Treatment: Iridocyclitis

- Pred Acetate 1% q1h or q2h or
- Durezol (Difluprednate) 0.05% with half the dosing
- Lotemax Long term
- Cycloplegia
  - Homatropine 5% bid
  - Cyclopentolate 1% bid

Systemic Disease- Ocular Involvement

- Herpes Simplex

Treatment: Epithelial Involvement

- In the past: trifluoridine - Viroptic q2h
- New replacement: **Zirgan** 5 x per day until ulcer disappears then TID x 1 week
- PO Valtrex 500mg TID
- PF artificial tears
- Follow-up (next day), day 3-4, day 7-10

Zirgan™(Ganciclovir Ophthalmic Gel) 0.15%

Zirgan™ (ganciclovir ophthalmic gel) 0.15% Indication

Dosage and Administration

- The recommended dosing regimen for Zirgan is 1 drop in the affected eye 5 times per day (approximately every 3 hours while awake) until the corneal ulcer heals, and then 1 drop 3 times per day for 7 days.

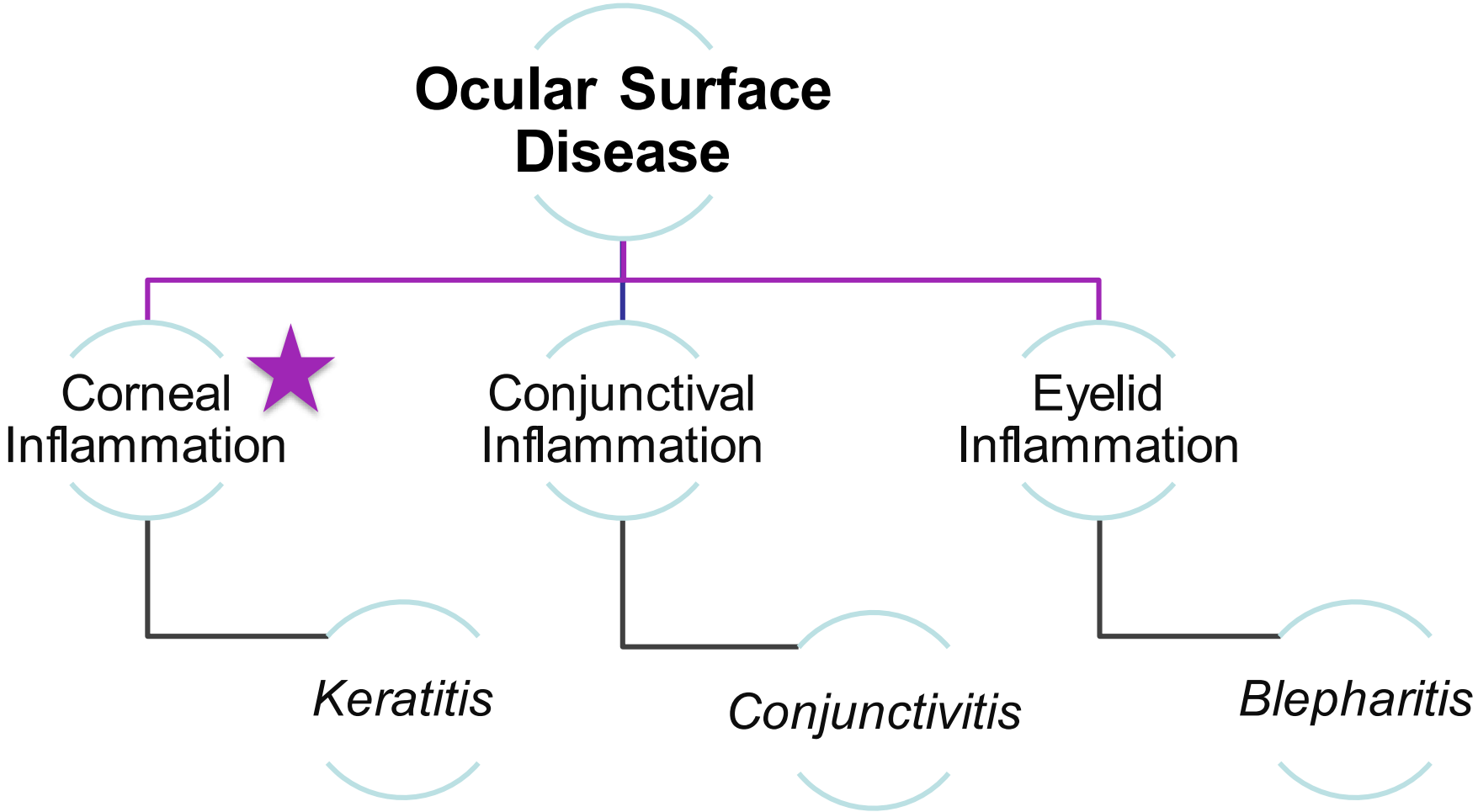
Treatment: Stromal keratitis or Endotheliitis

- Durezol QID
- Pred Forte Q2H
- Cover with PO Acyclovir (400 mg bid) or Valtrex (1000mg QD) or topical (Zirgan TID)

Restoring Corneal Clarity

- Prokera inserted
- Patient continued oral Valtrex 500mg QD
- Returns 5 Days later for removal:

Inflammation is the Hallmark of All Ocular Surface Diseases



The Structure of the Fetal Amniotic Membrane

Epithelium	• Metabolically active cuboidal cells with microvilli present on its apical surfacce
Basement Membrane	• Made up type IV, V and VII collagen (also found on conjunctival and corneal basement membranes) • Fibronectin and Laminin
Stroma	• Compact Layer provides tensile strength • Fibroblast Layer • Spongy Layer