IN THE MEDALS: MY FAVOURITE CASES

Paul C. Ajamian, O.D., F.A.A.O.

No matter what side of the pond you live on, or what the laws are, the rules are the same…

✓ Be observant and curious
✓ Never panic
✓ Don’t be afraid to tackle new things
✓ Always explain VA loss less than 20/20 or have a plan to do so

Rule 1: Be Observant!

Rule 2: Don’t Panic!

◊ Even if others before you missed the dx doesn’t mean you will
◊ Calmly assess the eye, one medical finding at a time

Rule 3: Don’t Be Afraid to Tackle New Things

Glaucoma is an area of untapped potential for optometrists!
Lacrimal procedures
If you are referring, always ask “what are they going to do that I cannot”

Rule 4: Explain VA not 20/20

LONDON 2012
Let’s Get Started with the Cases!
- On each case, compare and contrast how OD’s in England and United states would handle the case

The Case of the Poppin’ Fresh Papilloma
- 38 WM
- Hx of a chalazion removed from LLL a year ago
- For three weeks has noticed that when he presses on his lower lid, .......

Don’t forget to evert those lids, upper AND lower!

What do you call this thing?
1. Squamous cell carcinoma
2. Kaposi’s sarcoma
3. Capillary hemangioma
4. Papilloma
5. Pyogenic granuloma

- Variant of capillary hemangioma
- Usually follows trauma or develops over inflammatory lesion like a chalazion
- A localized form of granulation tissue composed of proliferating capillaries and endothelial cells

Management
- Steroids
- Surgery
Take Home Point
- Watch out for pyogenic granulomas

The Case of the Sticky Situation
- 53 WF
- Itchy eyes for a few days
- Reaches into the bathroom closet for an “allergy drop”

What to do?
1. Calmly assess prior to punting
2. Use force to pry lids open
3. If #2 does not work, use more
4. Use acetone to open lid
5. Warm soaks for three days, then see patient back

Take Home Point
- Don’t be afraid to remove superglue from the eye and lids

Leukocoria?
- 47 BF
- s/p IOL’s OS for milky NS
- Can’t afford Zymaxid so replaced with Ciloxan
- 1 day visit 20/20
- 1 week visit 20/40
  - OD notes an abrasion, ups dose of ciloxan
- 1 month visit 20/400

Microbial Keratitis (MK)
- Definition: An infection of the cornea by microbes characterized by excavation of the epithelium, Bowman’s layer, and stroma with infiltration and necrosis of the tissue.
Differential Diagnosis

- Definitions:
  - Ulceration: A local defect or excavation of the surface of an organ or tissue which is produced by the sloughing of inflammatory necrotic tissue
  - Infiltration: The diffusion or accumulation in a tissue or cells of substances not normal to it or in amounts in excess of normal

Differential Diagnosis of Corneal Conditions, Joseph P. Shovlin, OD, FAAO

Ucers….may need something more than

- Zymaxid
- Moxeza
- Besivance

28 yo WM Smoker
Silicone Hydrogels with 5 day EW

- Fortified Vancomycin 25 mg/ml and Tobramycin 14 mg/ml
- Add a steroid within a few days

Take Home Point

- Use the fourth generation fluoroquinolones!
- Be ready to “spread the joy” on nasty ulcers

The Case of the Bump in the Road

- 8 yo WF in for routine exam
- VA 20/20
- Slit lamp exam reveals iris elevation temporally OD
• Pupil shape normal
• Gonioscopy normal except for elevation
• Dilated exam using 4 mirror lens: difficult to see anything

Question:
• A patient with these clinical findings most likely has a(n):
  1. Iris cyst
  2. Iris melanoma
  3. Ciliary body melanoma
  4. Anatomical variant

Differential Diagnosis: Benign iris cyst vs. ciliary body melanoma
DX: Iris cyst

Take Home Point
• Take iris bumps seriously and rule out malignancies

The Creepy Dude
• 24 WM
• “My right eye has been swollen for 5 days”
• Best friend had pink eye lasting 7 days

• Sent by OD for oral antibiotic for “preseptal cellulitis”
- VA 20/40 best with infiltrates
- Huge node on r side
- 4+ follicles and sub-conjunctival hems

Dx:
- EKC
- Swollen lids can be a hallmark
- Red eye and node distinguish this from a preseptal

New Dx and Tx??
Adenodetector?
Betadine?

Until definitive studies are done...
I prefer a clinical assessment and Pred Forte…..or Zirgan? Clinical studies to come….
Tincture of Time and education

Take Home Points
- EKC can cause significant lid swelling and lead you away from the correct diagnosis
- Zirgan may have a place in therapy
- Betadine overrated in my opinion, no real clinical data yet
Doctor Heal Thyself

- 61 WM Optometrist
- Red OS x 8 days
- Was traveling and saw no one
- Self medicated with Tobradex
- Caused plant to grow out of his left ear

Caution!

- What looks like a delicate dendrite can turn into a large ghost dendrite and scar
- Be careful of visual axis lesions!
- May want to get corneal specialist involved

ZIRGAN® (US) VIRGAN (UK) Indication and Usage

ZIRGAN® is a topical ophthalmic antiviral that is indicated for the treatment of acute herpetic keratitis (dendritic ulcers).

Important Risk Information for ZIRGAN®

ZIRGAN® is indicated for topical ophthalmic use only. Patients should not wear contact lenses if they have signs or symptoms of herpetic keratitis or during the course of therapy with ZIRGAN®. Most common adverse reactions reported in patients were blurred vision (60%), eye irritation (20%), punctate keratitis (5%), and conjunctival hyperemia (5%).

ZIRGAN® Approved with an Orphan Drug Designation

- Under the Orphan Drug Act, the FDA designates a drug product as an “Orphan Product” if the disease or condition for which the drug is used affects less than 200,000 people in the US
- Orphan Drug Designation in the US was granted to ZIRGAN® on March 22, 2007 for the treatment of acute herpetic keratitis
- ZIRGAN® FDA approved for sale on Sept 15, 2009...Bausch & Lomb purchased the U.S. rights from Sirion
- Shipments to pharmacies began in Q2 2010

ZIRGAN™ (ganciclovir ophthalmic gel) 0.15%

Product Specifications

- Polyfoil 5 gram tube with dropper filling
- Gel formulation (carbomer-based vehicle)
- pH = 7.45
- Osmolality = 300 mOsmol
- Preservative= BAK 0.0075% (75 ppm)
- Store at 15°-25° C (59°-77° F)...Do not freeze
- Also available in 1 gram sample size

ZIRGAN® Mechanism of Action

1. Competitive inhibition
   - Activated GCV directly inhibits viral DNA polymerase, preventing viral replication

2. Chain termination
   - Activated GCV incorporates into viral DNA, preventing DNA synthesis
ZIRGAN® Development

- Developed to address tolerability concerns with other antivirals
- Over 15 years clinical experience in Europe
- Marketed as Virgan outside the US
- In clinical trials, compared to ACV 3% ointment
- To date there have been no clinical trials conducted to compare GCV to TFT

Summary of Differences: ZIRGAN® Compared to Viroptic®

<table>
<thead>
<tr>
<th></th>
<th>ZIRGAN®</th>
<th>Viroptic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active ingredient</td>
<td>Ganciclovir 0.15%</td>
<td>Trifluridine 1%</td>
</tr>
<tr>
<td>Dosage Form</td>
<td>5 gram tube</td>
<td>7.5 mL dropper bottle</td>
</tr>
<tr>
<td>Storage</td>
<td>Store at 15°C-25°C (59°F-77°F)</td>
<td>Store under refrigeration 2°C to 8°C (36° to 46°F)</td>
</tr>
<tr>
<td>Preservative</td>
<td>BAK 0.075 mg</td>
<td>Thimerosal 0.001%</td>
</tr>
</tbody>
</table>

Dosage Frequency

- ZIRGAN®: Instill 1 drop in the affected eye 5 times per day until corneal ulcer heals and then 1 drop 3 times per day for 7 days.
- Viroptic: Instill 1 drop onto the cornea of the affected eye every 2 hours while awake for a maximum daily dosage of 9 drops until the corneal ulcer has completely re-epithelialized. Following re-epithelialization, treatment for an additional 7 days of 1 drop every 4 hours while awake for minimum daily dosage of 5 drops is recommended.

Bungeeeeee!

- 18 yo 280 pound white male
- Full football scholarship to USC
- At track practice, bungee cord used to simulate resistance to shotput
- One end of cord held by 90 lb girl, other end pulled by our guy
- Cord lets go, bam!

- Sees OD that night
- Told to go to emergency room, has “no vision” and “large hemorrhage in eye”
- Told he needed “MRI or Ultrasound”
- Parents scared to death, sent to us in a.m.

- Methodical exam yielded VA of 8/200…that is, until I scoped a -6.50 and had him read the chart…..now 20/30!
- Moderate bulbar injection as shown
- Cornea clear
What’s the best way to wrestle uveitis to the mat?

Uveitis: Clinical Features
- Cell and flare—grade each separately
- Open up the beam, slit lamp on high, beam splitter off, and room pitch black

Clinical Features
- Cell and Flare
- Hypopyon
- Cyclitic membranes
- KP
- Corneal edema
- IOP...high or low
- Cells in the vitreous
- Periphlebitis

Pearl
- DILATE before you make the diagnosis of “anterior uveitis”

Management
- Be Aggressive!
- Taper slowly: lag tapering behind improvement
- Think about punctal occlusion
- Don’t be afraid of steroid responders
Steroids
- Pred Acetate 1%
- Use in high doses initially (q2h at least!)
- Severe AC reaction warrants q30 minutes, at least for a day or two

Warning!
- Try to get (or give) brand name Pred Forte or Econopred Plus
- Beware of the “genetic” drug!

When the going gets tough….
- Durezol time!
- Half the dose in some cases
- Don’t need to shake and bake

Durezol: steroid approved for post-op inflammation and uveitis

Steroids
- Don’t forget about sleeping hours
- Decadron ointment
- Can be made up by your pharmacist or compounding pharmacy *
- OR>>>>>>>>>>>>>

Dilating Agents
- Mild cell and flare: Homatropine 5%
- Moderate to severe with/without evidence of synechiae: Atropine 1%, Phenylephrine 10% (cardiovascular history)
- Give loading dose in office, then Rx QID
Clinical Pearl

• Have several bottles of 1% Atropine and 10% Phenylephrine on hand at all times, as most pharmacists don’t carry either of them!

Tapering The Drops

• Lag tapering behind improvement (PF + dilating agents!)
• Don’t be in a rush to taper
• Warn patients at outset they may be on drops for 4 to 6 weeks

Tapering Drops

• Example of tapering schedule:
  Day 1  4+ c/f       PF   Q1/2 h
  Day 2  sx better    PF   Q1/2h
  Day 3  2-3+ c/f     PF   Q 1h
  Day 5  2+ c/f       PF   Q 2 h

Take Home Points

• Hit uveitis patients over the head with Pred
• Have atropine and 10% phenylephrine on hand and use it
• Don’t forget steroids at night
• Recurrent episodes or bilateral disease need to be worked up

The Case of the Running Eye

• 41 WF
• Breast cancer survivor
• Worried about itching and “tearing” OS > OD, worse when “out of contacts”
Pearl
- Always ask about tearing…“do the tears run down your face?”

Tears Down Cheeks?
- Yes
- No
- Check for punctal apposition & patency, blockage of canaliculus
- dry eye workup

True epiphora
- examine punctal openings (size and apposition to globe), then dilate/irrigate to determine site of blockage

Irrigating Cannulas/Dilators
- Burnstine Lacrimal Cannula 23 ga
- Shahinian Lacrimal Cannula, straight (bullet tip 23 ga)
- KATENA.COM

Irrigation

Take Home Pearl
- Always ask about tearing…“do the tears run down your face?”
- Think about adding lacrimal procedures to your practice!
Pink Eye Gone Wild?

- 73 BF
- 1 week hx of severe mucopurulent drainage OS and a red eye
- Began noting “raw, irritated” skin above and below eye with itching
- Was applying frequent hot soaks to area around OS
- Awoke the morning we saw her with swelling below RLL and “HM Vision OS”

What about the VA?

- Initial VA HM…but that was because her OS was closed!
- Once open, 20/30
- Cornea clear
- AC Deep and Quiet

So what’s your diagnosis?

Atopic Dermatitis

- Think of it as a form of eczema triggered by a variety of irritants
  - Soaps, harsh chemicals, heat, stress, foods, and certain infections such as
  - Staph Aureus: a frequent cause of this condition with skin response in periorbital region
  - NOT RELATED TO SURGERY!

Management

- Antibiotic drops OS QID
- Tobradex ointment for eczema
- Benadryl OTC 25mg tabs QID
- Total resolution 4 days later with photos to prove it!