The SEVEN HABITS of Highly Effective Anterior Uveitis Management

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Case History

• 68 y.o. Caucasian female
• Complains of photophobia and blurred vision
• As well as a headache over right eye for 2 days

SLEx findings:

SLEx corneal findings:

Diagnosis??
Nearly 1 Million Americans develop it each year.
HZ ophthalmicus accounts for up to 25% of presenting cases.
Over 50% incur ocular damage.

Hutchinson’s Sign:
- Lesion on the tip of the nose
- Nasociliary branch of ophthalmic division of trigeminal nerve (V)
- Nasal means possibly ciliary (ocular) involvement

According to a study by Thean what was the most common complication associated with HZO?

A. Iritis  B. Optic neuritis
C. Neurotrophic keratitis  D. Scleritis

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

Herpes Zoster Ophthalmicus

Pseudodendrites
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 ______________!!

Seven Rules of Highly Effective Iritis Management
1. Rule out keratouveitis
2. Check IOP
3. Rule out previous ocular surgery
4. Gauge severity – need for systemic work-up
5. Treat AGGRESSIVELY
6. Go beyond AC cell and flare (Restore the Blood-Aqueous Barrier)
7. Dilate and examine the posterior segment

Rule out keratouveitis

Typically IOP will go down because of slowing of the ciliary body muscle
- Can it go up?
- Trabeculitis
- HZO case described earlier had an IOP of 56!
Rule out previous ocular surgery

- A significant iritis following a surgical procedure may be an endophthalmitis.
- According to the ASCRS 2009 & 2010 surveys the average time of diagnosis of endophthalmitis after cataract surgery was:
  - 9.2 days!

Gauge Severity to determine if further testing is required
When would a systemic work-up be warranted?

- PS or PAS
- KP's on endothelium
- Hypopyon
- Bilateral presentation
- Recurrent presentation

- In all cases?
- Over 50% of iritis cases are HLA-B27 positive

Six Initial Tests to Run:

1. CBC with Diff (also check lymph nodes)
2. SED rate
3. HLA-B27 antibody
4. ANA (antinuclear antibody)
5. FTA-ABS (fluorescent treponemal antibody absorption)
6. ACE (angiotensin converting enzyme)

HLA-B27 positive antibody:

- Indicates a systemic predisposition
- Diseases include but are not limited to:
  - Juvenile rheumatoid arthritis
  - Rheumatoid arthritis
  - Ankylosing spondylitis
  - Reiter’s Disease
  - Crohn’s disease or ulcerative colitis

- Ask about psoriasis i.e. psoriatic arthritis
- Young men
- Ask about lower back pain or stiffness
- Ask about diarrhea and GI problems

Treat aggressively

- Never start an iritis treatment QID
- Must be Q2H or Q1H even for grade 1
- Or consider stronger steroids: Durezol QID
- NEW: LOTEMAX UNG QHS
Loteprednol ung attributes (FML ung backup)

- Established efficacy in post-operative inflammation and pain¹
- Low risk of significant intraocular pressure (IOP) elevation seen in clinical studies²
  - <1% of patients experiences intraocular pressure elevation ≥ 10 mm Hg
  - If product is used 10 days or longer IOP should be monitored
- Preservative-free¹
- As with other ophthalmic corticosteroids, LOTEMAX® ointment is contraindicated in most viral diseases of the cornea and conjunctiva including herpes simplex keratitis (dendritic keratitis), vaccinia, and varicella, and also in mycobacterial infection of the eye and fungal disease of the ocular structures¹

Difluprednate

- Developed by Mitsubishi as a dermatological preparation
- Categorized as a "very strong" steroid in dermatology
- Developed by Senju as an ophthalmic emulsion

Difluprednate Molecule

To increase penetration
To increase potency
To increase anti-inflammatory activity

Difluprednate Formulation

- Developed as an emulsion
  - No shaking required
  - BAK-free
  - Uses sorbic acid as a preservative
  - Available in 5 mL bottle

Masking Scheme

- Patients were each given two bottles: Bottle A and Bottle B
  - Each patient received 8 drops every day
- In the Durezol group Bottle A contained Durezol and Bottle B contained vehicle
- In the Pred Forte group, Bottle A contained Pred Forte and Bottle B contained Pred Forte

Mean Change from Baseline in Anterior Chamber Cell Grade

At Day 14, the non-inferiority hypothesis was met, demonstrating that Durezol QID was not inferior to Pred Forte dosed eight times a day with a Confidence Interval of 95%

Mean Score at Baseline
Durezol = 2.5
Pred Forte = 2.4

Percent of Subjects with Clearing of Anterior Chamber Cells (Grade 0 defined as ≤ 1 cell)

Mean Change from Baseline in Total Symptom Score*

The total symptom score was the sum of pain/ocular discomfort, photophobia, blurred vision, and lacrimation. Each symptom was graded using a visual analogue scale that ranged from 0-100. Patients were asked to assess these symptoms by using a mark on a 100 mm line where 0 = absent, 100 = maximal.

Mean Score at Baseline
Durezol = 187.6
Pred Forte = 165.1

Percent Reduction in Mean Pain Score from Baseline

Mean Score at Baseline
Durezol = 48.7
Pred Forte = 44.5

Treatment: Iridocyclitis

- Pred Acetate 1% q1 or q2h
- Durezol (Difluprednate) 0.05% QID
- Lotemax Longer term or in Glaucoma patients
- Cycloplegia
  - Homatropine 5% bid
  - Cyclopentolate 1% bid
The Importance of Cycloplegia

1. Re-establish vascular permeability
2. Prevent synechiae
3. Pain Management

AVOID: ________________

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Dilate

- Rule out other causes e.g. retinal tear or RD
- Examine the posterior pole for vitritis, overflow, chorioretinitis etc.
- Systemic indications

Taper and extend

- Typical Example:
  - Durezol QID under significant improvement in AC reaction then TID x 1 week, BID x 1 week, QD x 1 week
- No C & F noted, continue for 3-5 days
Conclusions:

- Iritis is a common condition diagnosed by optometry.
- Following the seven rules will allow you to successfully manage these patients and keep you out of trouble.
- Understand the importance of systemic disease in iritis and take appropriate measures to co-manage.
- Keep advancing, iritis is a great area of ocular disease management.

THANK YOU

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