The SEVEN HABITS of Highly Effective Anterior Uveitis Management

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DGH Technology	Novartis	TrueVision Systems
Dompe	Oasis Medial	Visant Medical
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Eyedetec	Ocular Sciences	Yolia
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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









Herpes Zoster Ophthalmicus

Herpes Zoster

Nearly 1 Million Americans develop herpes zoster 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 D. Scleritis keratitis

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 glaucoma!!

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





Rule out keratouveitis



Check IOP

Typically IOP will go down because of slowing of the ciliary body muscle Can it go up? Trabeculitis, fibrin in the AC HZO case described earlier had an IOP of 56!

Insert patient with Fibrin and IOP of 50

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, and BMP (also check lymph nodes) 2. ESR/CRP
- 3. HLA-B27 antibody
- 4. RPR and FTA-ABS (fluorescent treponemal antibody absorption) 5. Quantiferon gold
- 6. VZV and HSV 1 and 2

HLA-B27 positive antibody:

- · Indicates a systemic predisposition
- Diseases include but are not limited to:
- Juvenile rheumatoid arthritis
- (< age 16)
 Rheumatoid arthritis Check the patients hand Ask about psoriasis i.e. psoriatic arthritis
- Ankylosing spondylitis Young men Ask about lower back pain or stiffness
- Ask about lower back pain or stiffn
 Reiter's Disease
- urethritis, tendonitis and polyarthritis • Crohns disease or ulcerative colitis
- 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: **Difluprednate QID**

NEW: LOTEPREDNOL UNG QHS

LQTEMAX[®] ointment is a new preservative-free steroid ointment.



Loteprednol ung attributes

- 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 keralitis (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 Formulation

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

Studied extensively in Japan for ophthalmic use In one preclinical pharmacokinetic study, the emulsion formulation was shown to have better ocular bioavailability than the suspension formulation¹

- In several preclinical studies, it was found to be Safe and well tolerated after repeated doses
 Effective at reducing inflammation in animal models of postoperative inflammation^{2,3}

al. Precisical pharmocokinetics of diffuperdate ophthalmic emulsion. ARVO Annual Meeting, May 6–10, 2007, PL Laudestale, PL, orgam 2561. et al. Efficacy of diffuperdate ophthalmic emulsion in precisical studies of uverits. ARVO Annual Meeting, May 6–10, 2007, PL patter EPL4, program 2662. Distinguistical emulaistic inhibits postoperative inflammation in rabbit paracentesis model. ARVO Annual Meeting, May 6–10, 2007, PL

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













Treatment: Iridocyclitis

Pred Acetate 1% q1h 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:

Atropine (synechiae lock)



ACTH Gel in Uveitis Retrospective Chart Review

Study Goal

To describe patient characteristics, treatment patterns with Acthar, and physicians' assessments of patients with uveitis treated with Acthar

- Study Design
- Ophthalmologists in the AMA physician and Acthar prescriber databases were contacted for cases of uveitis treated with Acthar
- in the past 12 months 91 eligible patient charts were identified
- -Health care providers abstracted data using an electronic data collection instrument and responded to survey questions – Data were aggregated and reported using descriptive statistics
- Retrospective data collection may be incomplete Outcomes may be influenced by therapies not documented in the chart Patient outcomes and safety were not quantified
- AMA, American Medical Association. Nelson WW, et al. J Ocul Pharmacol Ther. 2019 Jan 24. doi: 10.1089/jop.2018.0090. [Epub ahead of print]

Patient Presentation

Patient Demographics (n=91)

Women, n=56 (62%)

· Patients were primarily:

Caucasian (n=42; 46%)

- African American (n=29; 32%)

typically associated with uveitis

 Hispanic/Latino (n=8; 9%) - Asian. (n=5 :5%)

• Mean age, 41±14 years (range, 11-78 years)

· 69% of patients had 1 or more comorbidities

- Anatomic presentation
 - Anterior uveitis (n=38; 42%) Intermediate uveitis (n=19: 21%)

Uveitis Characteristics (n=91)

- Posterior uveitis (n=9; 21%)
- Diffuse uveitis/panuveitis (n=15: 16%)
- · Both eves affected in 59% of cases
- · Mean duration of uveitis diagnosis, 3.98 years
- · Mean number of acute episodes, 3.5
- Symptom severity
- Moderate (n=63; 69%) - Severe (n=23: 25%)

RA, rheumatoid arthritis. Nelson WW, et al. J Ocul Pharmacol Ther. 2019 Jan 24. doi: 10.1089/jop.2018.0090. [Epub ah

Signs and Symptom (n=91	and Vis	ual Impa	irment	Severe	
Blurred vision	81 (89)	10	52	19	
Light sensitivity	41 (45)	9	22	10	
Floaters	40 (44)	12	25	3	
Visual loss/acuity	40 (44)	5	24	11	
Eye pain	34 (37)	9	20	5	
Eye redness	30 (33)	6	22	2	
Visual Impairment, n (%)		1 Eye (n=37)	Both Eyes (n=54)		
Mild or none (better than 20/70)		10 (27)	11 (20)		
Moderate (worse than 20/70, better than 20/200)		18 (49)	30 (56)		
Severe (worse than 20/200, better than 20/400)		9 (24)	12 (22)		
Undetermined/unspecified		0	1 (2)		

Physician assessment in response to: Please select the outcomes below that have improved as result of Acthar treatment 83/91 (91%) of patients • At the time of data collection, Acthar Respondents selected all options that apply n (%) Improvements in vision 78 (86) Improvements in eve pain 25 (27) Physicians' response to: Improvements in vitreous haze 24 (26) What is the patient's current status? Reduction of background medication use 22 (24) Patients improved, n=76 (84%) Patients were same, n= 15 (16%) Improvements in vitreous flare 21 (23)

Improvements in macular edema

Additional Observations Concomitant Medication Use Before, During, and Following the Start of Acthar therapy 100 Prior to Acthar initiation, all 91 patients were receiving concomitant medications for uveitis 75 Concomitant medications used by ≥20% of patients in the 3 months prior to Acthar initiation included steroid eye drops, oral steroids, intraocula Patients, 50 steroids, and nonsteroid eye drops The number of patients treated with concomitant 25 medications decreased during Acthar treatment, and during the 3 months following the initiation of Acthar therapy 3 months prior to Acthar During Acthar treatment 3 months after Acthar initiation initiation

ACTH Gel Storage and Handling for Administration

Acthar offers flexible dosing for patients and providers

- Acthar (IM or SC) can be given by a caregiver or selfadministered
- Typical dosing 80 mg SC two times per week for 3 months • then taper
- Acthar Gel should be stored under refrigeration between 2°C and 8°C (36°F-46°F)
- Vials should be warmed to room temperature before using



16 (18)



- - on WW. et al. J Ocul Pharmacol Ther. 2019 Jan 24. doi: 10.1089/jop.201

- Observations and Assessments
- Acthar was used for the first time by ٠

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Taper and extend

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



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







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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