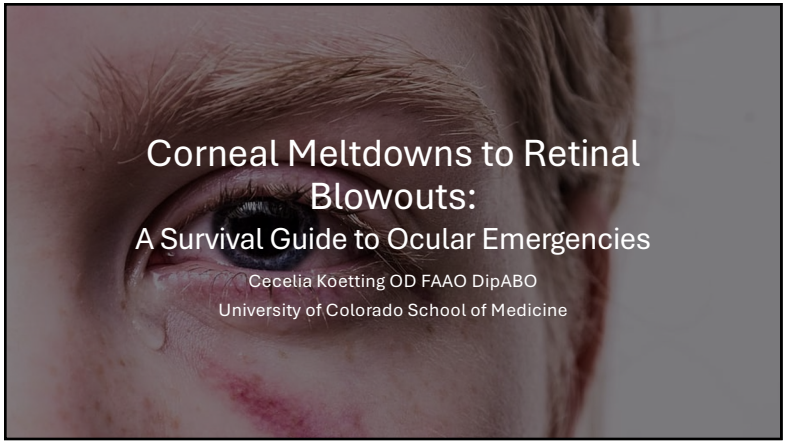


1

CECELIA KOETTING FINANCIAL DISCLOSURES

**All relevant financial relationships have been mitigated. The content of this COPE-accredited CE activity was planned and prepared independently by Cecelia Koetting without input from members of an ineligible company.*

- Ocular Therapeutix -C
- Horizon-C
- Quidel-C
- Ivantis-C
- Orasis-C
- Otto-C
- Trukera-C
- LENZ-C
- Tarsus-C,S,R
- Myze- C

+ Glaukos-C
+ B +L- C,S
+ Iveric-C
+ Aldura-C
+ Claris Bio-C
+ Aldeyra-C
+ Twenty Twenty Therapeutics-C
+ Dompe-C,S,R
+ Kala- R

- Oyster Point/Viatris-C, S,R
- Allergan/Abbvie –C,S,R
- Alcon-C,S
- Visus-C,S
- Harrow-C,S
- Thea-C,R
- Bruder-C
- Blinkjoy-C
- SCOPE-C

Intrepid

KOETTING CONSULTING, LLC

2

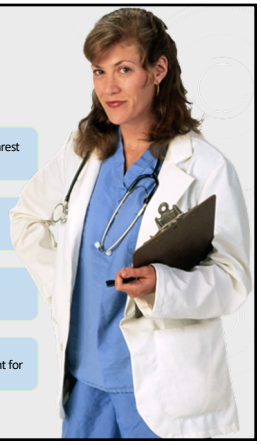
Changes in optometry and medicine, along with changes in technology

- Smartphone pictures
- Online exams
- Telemedicine vs telehealth

3

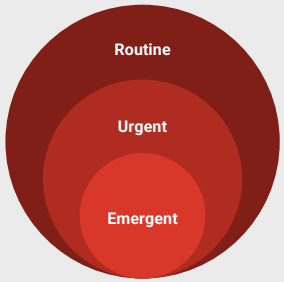
LEVELS

Immediate/Emergency	• Should come to office to be seen immediately, or to nearest emergency eye care facility
Urgent	• 24 hours
Semi-Urgent	• 1 week
Routine	• Next available • Does not pose immediate threat, may have been present for more than a week



4

TACKLING THE TRIAGE:

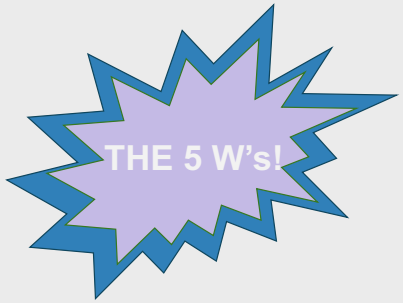


Written protocol

Staff training
- Including mock scenarios
- Calls and case review

When in doubt, see the patient!

5



6

THE 5 W'S

- Who
- What
- When
- Where
- Why

- Assess and classify a patients signs and symptoms according to their severity and urgency

7

YOU'RE PUTTING YOUR COAT ON AND GRABBING YOUR BAG WHEN.....

8

Case 3

OCULAR TRAUMA

Case presentation

- 74 YOA white male
- CC eye injury to the right eye when walking through the woods and he stepped on a piece of rebar that flipped up and hit him across the right side of his face.
  - "My eye feels gritty and wet. I can see out of it, but its like looking through broken glass. There are a lot of floaters."

9

FINDINGS

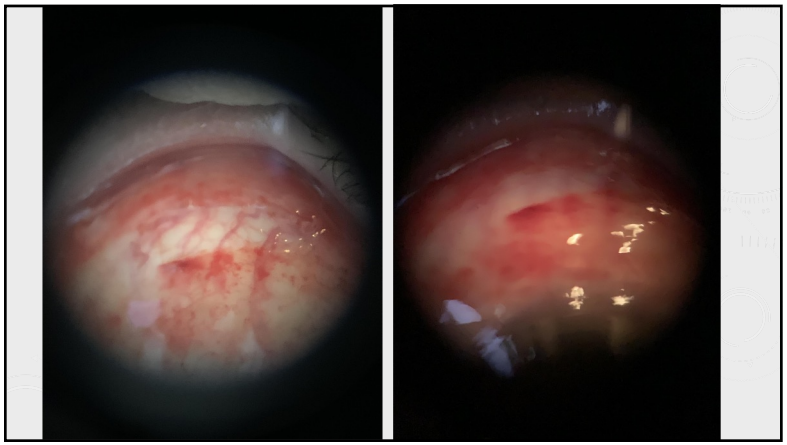
VA sc OD 20/20 OS 20/20

IOP applanation OD 16 (after SLE) OS 16

SLE OD

- Eyelids: bruising 2+edema
- Conjunctiva: subconj heme superior, 12mmx 2-3mm superficial laceration superior under eyelid, not involving sclera, Negative Seidel
- Cornea: WNL
- AC: D&Q
- IOL PCIOL in Good position s/p YAG
- Posterior few floaters, CD 0.3, (-)holes/tears/RD

10



11

Dx: Conjunctival Laceration

- Consulted cornea specialist
  - Closing wound vs leaving open
- Bandage contact lens
  - Kontour size 22
- Antibiotic QID
- Follow up on Monday
  - Started steroid and decided against closure

NOW WHAT?

12

W

- Evalua
- Ocular
  - S
  - S
    c

13

CONJUNCTIVAL LACERATION

Identify using NaFL strip or drop to highlight area of abrasion

- Check Seidel sign

Cotton tip applicator to look for residual foreign matter

Deep or non-mobild FB or if uveal tissue showing refer out

Dilated fundus esam with ocular trauma

- Avoid if uveal tissue prolapsed in wound or foreign body in AC or glob disorganization

14

TREATMENT

Small laceration

- Antibiotic ointment or drop QID until defect closed
- No rubbing, discontinue CL
  - Plastic shield

Moderate or large laceration

- Consider referral, may require surgical repair
  - Cauterization, absorbable sutures
  - Sterilization of the wound

15

Case 2

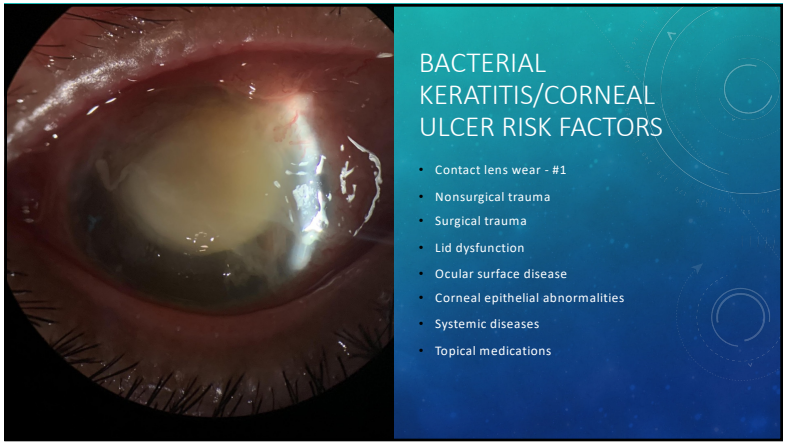
CENTRAL CORNEAL ULCER

- 22 Year old Female
- "I slept in my contacts the last few nights and I woke up in pain and the light hurts my eyes!"

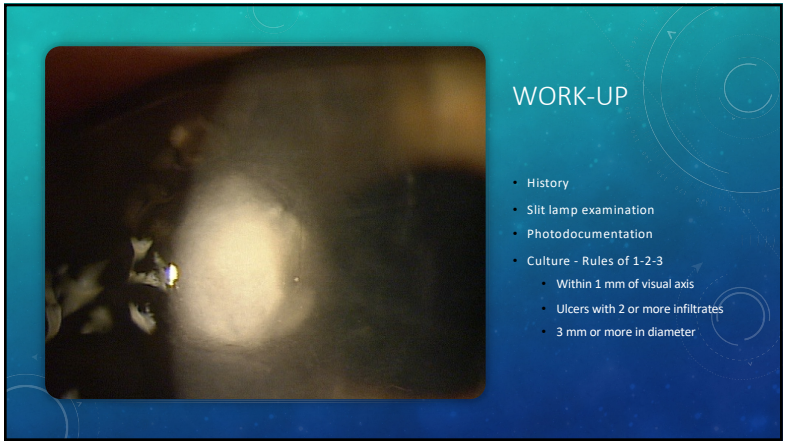
16


WHAT SHOULD YOU ASK?

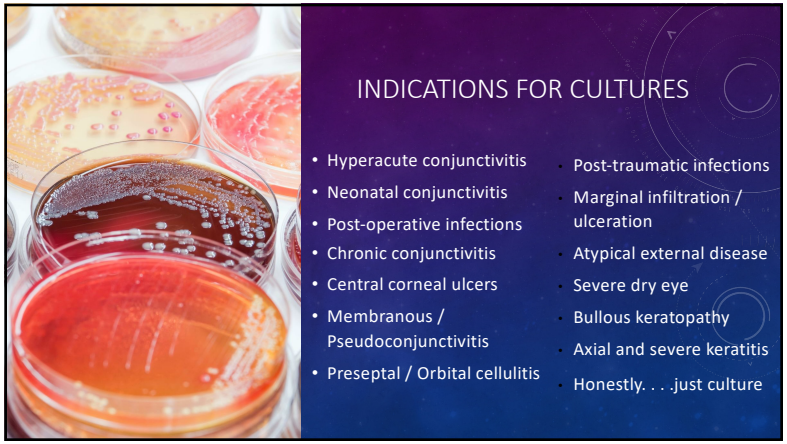
17


BACTERIAL KERATITIS/CORNEAL ULCER RISK FACTORS
Contact lens wear - #1
Nonsurgical trauma
Surgical trauma
Lid dysfunction
Ocular surface disease
Corneal epithelial abnormalities
Systemic diseases
Topical medications

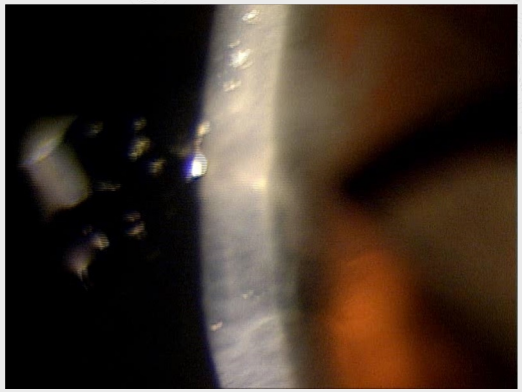
18


WORK-UP
History
Slit lamp examination
Photodocumentation
Culture - Rules of 1-2-3
Within 1 mm of visual axis
Ulcers with 2 or more infiltrates
3 mm or more in diameter

19


INDICATIONS FOR CULTURES
Hyperacute conjunctivitis
Neonatal conjunctivitis
Post-operative infections
Chronic conjunctivitis
Central corneal ulcers
Membranous / Pseudoconjunctivitis
Preseptal / Orbital cellulitis
Post-traumatic infections
Marginal infiltration / ulceration
Atypical external disease
Severe dry eye
Bullous keratopathy
Axial and severe keratitis
Honestly. . . .just culture

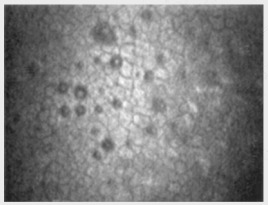
20



21

CONFOCAL MICROSCOPY

- Historically used for endothelial cell evaluation
  - Fuch's dystrophy
  - Post-surgical bullous keratopathies
- Studied for use in diagnosing infectious keratitis
  - Acanthamoeba
  - Fungal keratitis
  - Studies show
    - Sensitivities: 80-94%
    - Specificities: 78-93%
  - Procedure
    - Thick fluid-coupling agent on cornea
    - Scans all layers



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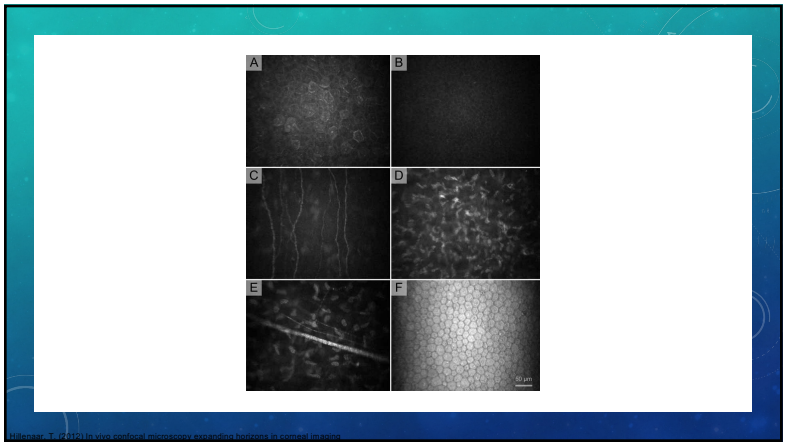
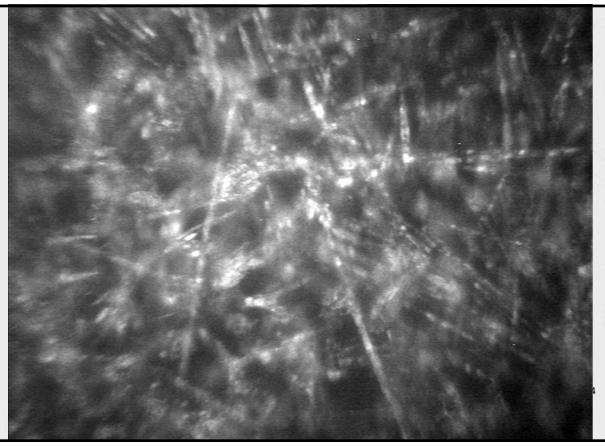


Hillenaar, T. (2012) In vivo confocal microscopy expanding horizons in corneal imaging

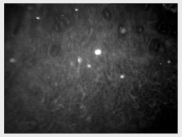
23



24

PATIENT 2.5 DX WITH ACANTHAMOEBA ULCER

- Monitored daily
  - Day #2: epithelium debridement and subconj. Gentamicin injection
    - Added Bactrim DS 1 PO BID along with Polyhexamethyline Biguanide/PHMBG 9-11x/day

25

FINAL RECOVERY

All satellite lesions healed ~15 days following initial evaluation

Cryopreserved membrane was inserted at 1 month visit

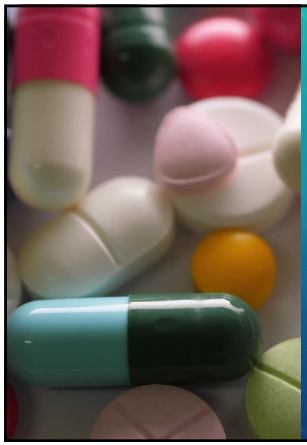
Patient continued to improve; PHMG was tapered weekly (7x/week, 6x/week,5x/week, 4x/week, etc.)

26

ACANTHAMOEBA

- Parasitic infection
  - *A. castellanii* and *A. polyphaga*
- Culture on dish of E. coli plated over non-nutrient agar
- Symptoms
  - Decreased vision
  - Typically pain is out of proportion to findings
  - Light sensitivity
  - Redness
  - Foreign body sensation
  - Lid edema
- Ocular findings
  - Epithelial irregularities
  - Epithelial or subepithelial infiltrates
  - Satellite lesions
  - Stromal infiltrates (ring-shaped, disciform)
  - Anterior uveitis
  - Scleritis
  - Chorioretinitis

27

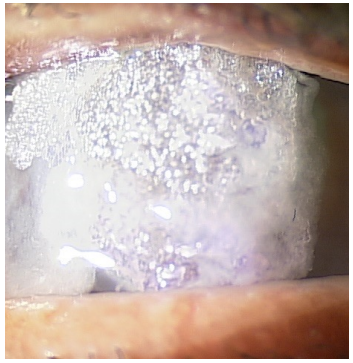


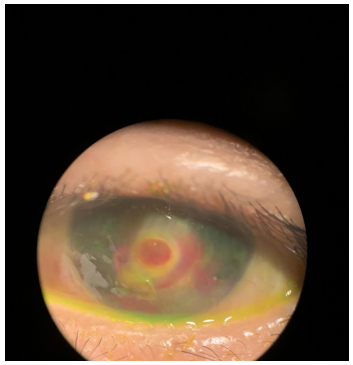
TREATMENT AND MANAGEMENT OF ACANTHAMOEBA

- Culture! Refer to someone with a confocal if possible
- Early stages- topical antibiotics
  - Fortified compounded
  - Often and aggressive
- Cationic antiseptics- polyhexamehtylene biguanide (PHMB) and Chlorhexidine
- Combination therapy with a diamidine
- Debridement of tissue
- Penetrating keratoplasty
- Steroids?
- What about CXL?

28

WHAT IF IT DOESN'T HEAL?





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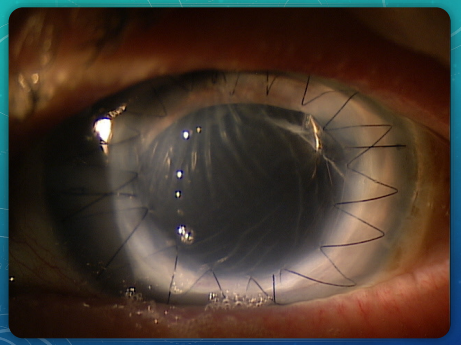


PENETRATING KERATOPLASTY

30

ACANTHOMOEBA MAY 2024- 15 YOA FEMALE

S/p 1. Corneal biopsy

- left eve 2. Placement of amniotic membrane on the surface of the lett eve - 07/26/2024/S/p Penetrating keratoplasty, left eye - 10/30/2024//Pt saw Vicki Ward this

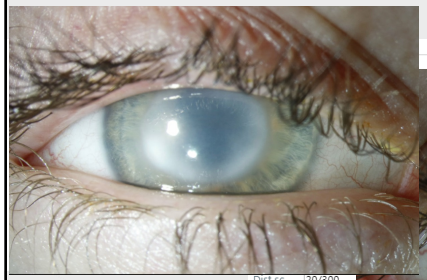
s/p corneal biopsy with AMT left eye - 7/26/2024

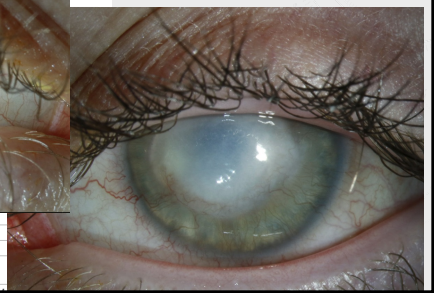
S/p PKP left eye - 10/30/2024

- Patient reports vision stable, using scleral CL in the right eye fit by Vicki

- Left eve with clear graft on exam no signs of infection or rejection - few loose sutures

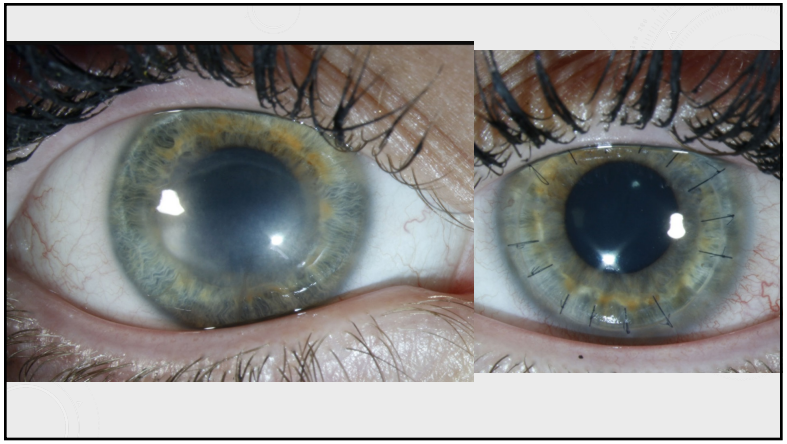
31





Dist sc	20/300
Dist cc	
Dist ph sc	20/80 -1
Dist ph cc	

32



33

Case :

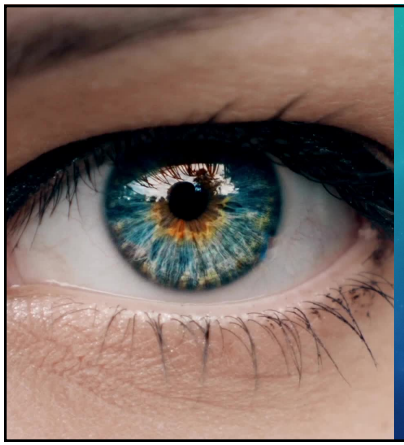
Acute IOP Elevation

75 YOA white male

Right eye pain 7/10, nausea, went to ED yesterday for headache

Pt notes has had intermittent Right side pain/headache on and off since beginning of year

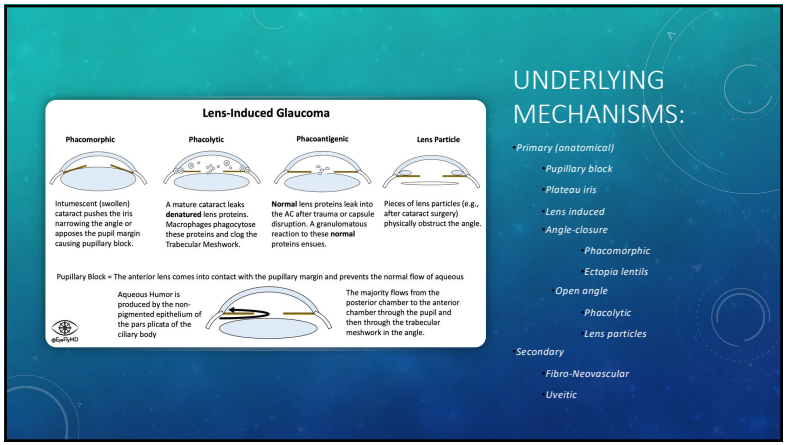
34



FINDINGS

- VA cc OD CF@1ft OS 20/60
- IOP iCare OD 59 OS 17
- SLE OD
  - Eyelids: blepharitis
  - Conjunctiva: diffuse 3+ injection
  - Cornea: 2+ guttae
  - AC: shallow; tr-1+ cell, flare
  - Lens: mature cataract
  - Posterior: no view
- SLE OS
  - Eyelids: blepharitis
  - Conjunctiva: tr injection
  - Cornea: 2+ guttae
  - AC: deep & quiet
  - Lens: 2+ NS, 1+ CS
  - Posterior: WNL
    - ONH 0.4, NRR intact
    - Macula flat, even pigment
    - Periphery attached

35



UNDERLYING MECHANISMS:

- *Primary (anatomical)*
  - *Pupillary block*
  - *Plateau iris*
  - *Lens induced*
  - *Angle-closure*
    - *Phacomorphic*
    - *Ectopia lentils*
  - *Open angle*
    - *Phacolytic*
    - *Lens particles*
- *Secondary*
  - *Fibro-Neovascular*
  - *Uveitic*

36

FINDINGS

- VA cc OD CF@1ft OS 20/60
- IOP iCare OD 59 OS 17
- SLE OD
  - Eyelids: blepharitis
  - Conjunctiva: diffuse 3+ injection
  - Cornea: 2+ guttae
  - AC: shallow; tr-1+ cell, flare
  - Lens: mature cataract
  - Posterior: no view
- **GONIOSCOPY:** open to CB in 2 quadrants, pTM in 2 quadrants; shallow 360
- Etiology: Phacolytic glaucoma

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MANAGEMENT:

- In-office IOP-lowering
  - Timolol 0.5%
  - Brimonidine 0.2%
  - Dorzolamide
  - Oral acetazolamide 250mg
- Recheck IOP in-office (repeat rounds q30m as needed) - 50* → 7, next day 38
- Transferred to hospital and scheduled for urgent CE
- Patient admitted, in-patient care due to complexity and SDOH barriers including transportation

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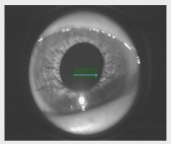
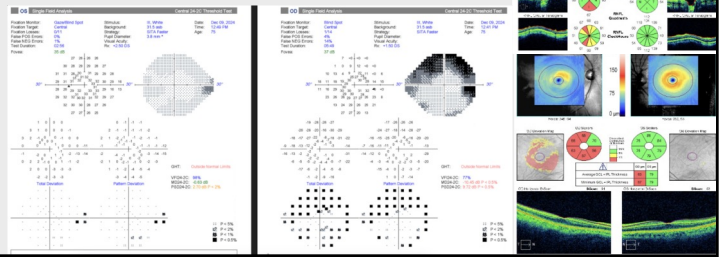
Back to our patient. . .

POM#2 S/p 23G PPV/PPL/ACIOL RE
On T.5 qAM, IOP 17
scVA 20/40 PH 20/25





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ADDITIONAL CONSIDERATIONS?

Pertinent findings:

- IOP 50mmHg or greater
- Shallow anterior chamber, peripheral anterior synechiae, pigment clumps in TM
- Corneal edema
- Fixed dilated pupil
- Ciliary flush, diffuse injection
- Closed angle on gonioscopy

AACG Risk Factors:

- Age
- Gender
- Ethnicity
- Family history
- Refractive error
- Medications

40

A 65 YEAR OLD CAUCASIAN FEMALE

- Presents for emergency evaluation of bilateral swollen eyelids, vision loss, and new onset of stabbing pain across the brow for the last 3 days.
- The symptoms began 12 hours after taking the first dose of Qsymia, a medication new to the patient, at 10:30am on 12/31/14.
  - The patient reports not having taken another dose of Qsymia since.
- Patient then reported to the ER approximately 1 day ago and was given both IV and oral Benadryl with no improvement in symptoms.
  - Patient had both a head and orbital MRI, with and without contrast, performed at the ER with no pertinent findings.
  - The patient has noted some relief in the pain since being prescribed pain mediation at the ER, but no improvement or worsening in other symptoms.
- OD: LP PHNI and OS: LP PHNI
- EOM painful with all movement
- Pupils were poorly visible through corneal haze
- Intraocular pressures: OD: 50mmHg and OS: 40mmHg
- Pachymetry: OD 802 and OS 783.
- 2+ lid erythema and 2+ lid edema; conjunctival 2-3+ chemosis, 3+ injection, sub conjunctival hemorrhage;
- Corneal clouding/steamy cornea, 3+ edema, 3+ endothelial striae; shallow anterior chamber, pupillary block, peripheral iris/corneal touch and approximately 1+ NS.
- Gonioscopy is attempted but unable to be performed at this time second to patients level of discomfort and bulbar conjunctival swelling.

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TOPIRAMATE-INDUCED BILATERAL AACG - WITH CILIOCHOROIDAL EFFUSION SECOND TO USE OF QSYMIA.

- The drug Qsymia was approved by the U.S. Food and Drug Administration (FDA) July 17, 2012 for weight loss in overweight adults who are also diagnosed with hypertension, type 2 diabetes mellitus, or hyperlipedimia.
- Combo of Phentermine and Topiramate extended release.
- It is well known in the optometric community that systemic use of Topiramate can result in both an acute myopic shift and **acute bilateral angle-closure glaucoma.**

ol, and 1 gtt of Lumigan,

olone Acetonid, OU

erformed OU

l TID OU, Istalol TID OU, and

- BCVA Stable at20/50 OD and OS with significant cataracts, which were surgically treated within the next 6 months.

42

Case 3.5:

Acute IOP Elevation

56 YO AA MALE

CHIEF COMPLAINT: ER patient referred for red eye & elevated IOP OS

Blurred vision, ocular discomfort, and redness OS x 1 month
Treated with fluorometholone TID OS
No improvement → IOP spike
Suspected steroid response
Started on brimonidine BID OS and timolol BID OS
IOP remained elevated with no improvement in symptoms

43

HISTORY/MEDICATIONS

- OCULAR HISTORY:
  - History of Herpes Simplex Keratitis
- MEDICAL HISTORY:
  - Hypertension
  - Kidney Transplant 2008
- MEDICATIONS:
  - Amolopidine
  - Aspirin 81mg
  - Calcium/Vit D
  - Carvedilol
  - Clonidine
  - Envarsus
  - Finasteride
  - Fish oil capsules
  - Myfortic
  - Omeprazol

44

EXAM FINDINGS:

- VISUAL ACUITY (cc):
  - OD: 20/25 +2
  - **OS: 20/60 +2,** PH 20/30-2
- PUPILS: unremarkable
- EOMS: full OU
- CFF: full OU
- IOP: **14/34**

45

ANTERIOR SEGMENT:

OD:

- CONJUNCTIVA:
  - White and quiet
- CORNEA:
  - **Superior stromal scar**
  - **Inferior fibrovascular pannus**
- IRIS: normal
- ANTERIOR CHAMBER:
  - Deep & quiet
- LENS: 1+ NS

OS:

- CONJUNCTIVA:
  - **1+ injection with Ciliary flush**
- CORNEA:
  - **2+ haze, 2-3+ SPK**
  - **Diffuse fine keratic precipitates**
  - **Subtle diffuse stromal scarring**
- IRIS: normal
- ANTERIOR CHAMBER:
  - **2+ cell, 1+ flare**
- LENS: 1+ NS

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UVEITIS WITH ELEVATED IOP → THINK VIRAL!

- Herpes Simplex Virus
- Herpes Zoster Virus
- Cytomegalovirus
- Rubella

- Anterior chamber tap or polymerase chain reaction can make definitive diagnosis[1]
  - Diagnosis often made on clinical findings and patient history

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	HERPES SIMPLEX	HERPES ZOSTER
AGE	<50	>60 or immunocompromised
GENDER	No predilection	No predilection
LATERALITY	Unilateral (18% bilateral)	unilateral
COURSE	Acute, recurrent	Acute, recurrent
KERATITIS	Common	Common
CORNEAL SCARS	Present 33%	Present 33%
KERATIC PRECIPITATES	Small to medium Same distribution as inflamed cornea; often central, paracentral, diffuse, or in Arlt's triangle	Small to medium Same distribution as inflamed cornea; often central, paracentral, diffuse, or in Arlt's triangle

Chan & Chee (2019)

48

HISTORY OF HSK AND PRESENCE OF OLD CORNEAL SCARS = HIGHLY SUGGESTIVE OF HERPES SIMPLEX VIRUS IN THIS CASE

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HSV UVEITIS:

Herpes Simplex Virus cause of up to 5-10% of all uveitis cases[2]

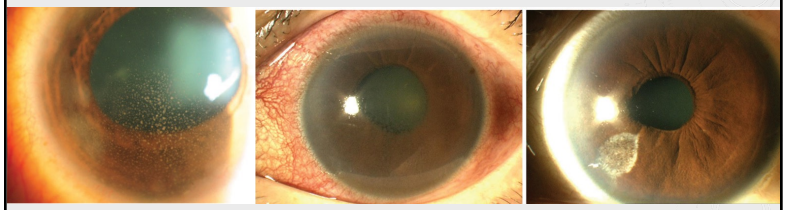
- More common in patients with previous history of HSK[1]
- 40-50 years old, both genders[1]

Clinical signs[1-3]:

- Unilateral most common, but can be bilateral
- Moderate anterior chamber reaction
- Medium sized keratic precipitates
- Elevated IOP due to trabeculitis and blockage of trabecular meshwork by inflammatory cells
  - Occurs in 46-90% of cases[2]
- Sectoral iris atrophy is pathognomonic for viral anterior uveitis[1,2]
  - Acute event → sectoral flattening of pupil border in involved area
  - After resolution → sectoral atrophy

50

HERPES SIMPLEX UVEITIS



KERATIC PRECIPITATES | SECTORAL IRIS INFLAMMATION @ 8 OCLOCK | RESULTING IRIS ATROPHY

Chan & Chee (2019)[1]

51

TREATMENT:

Topical steroid

Oral antiviral:

- Acyclovir: 400mg 1 PO 5x/day
- Valacyclovir: 500mg 1 PO TID

Topical IOP-lowering drops

- Aqueous suppressant
- Not needed long-term once trabeculitis resolves

52

BACK TO THE CASE: ASSESSMENT & PLAN

Herpesviral Iridocyclitis OS
- Start prednisolone acetate 1% QID OS
- Ganciclovir gel 5x/day OS
- Valacyclovir 500mg 1PO QD

Ocular hypertension OS
- Timolol BID OS
- Brimonidine BID OS

Central corneal scar OS
- Likely secondary to previous herpetic events

Dry eye OS
- Preservative free tears Q1-2H OS

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REDUCED DOSE OF VALACYCLOVIR?

Oral antivirals hold risk of acute renal failure[4]
- 60-90% of drug excretion by the kidneys
- Can solidify in the nephron tubules leading to obstruction and acute increase in creatinine → "crystalline nephropathy"

Patient is a kidney transplant recipient!
- Always speak to nephrologist regarding dosing before prescribing – the patient was cleared for QD dosing
- Creatinine and blood urea nitrogen (BUN) monitored closely while on medication

54

Case 4:

Red Watery Eyes

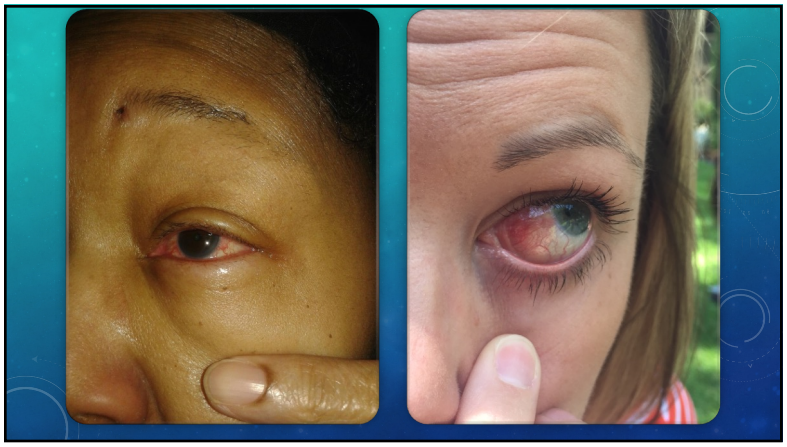
24 YOA Caucasian male
Sudden decrease in vision, red watery eyes worsening over the last few days, started in OS then spread OD. Eyes are light sensitive and painful.
No ocular hx/meds
No systemic meds or hx

55

BCVA OD: 20/40; OS 20/60

Anterior OU:
- 2+ lid edema
- 2+chemosis with sub conjunctival hemorrhage 360
- Pseudomembrane with fornix shortening
- Cornea 1-2+SPK
  - NO SEI
- AC clear
- Swollen pre-auricular nodes. . . .

56



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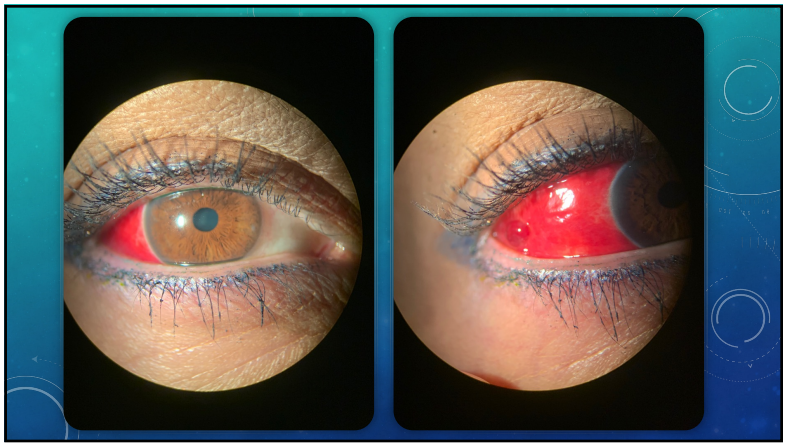

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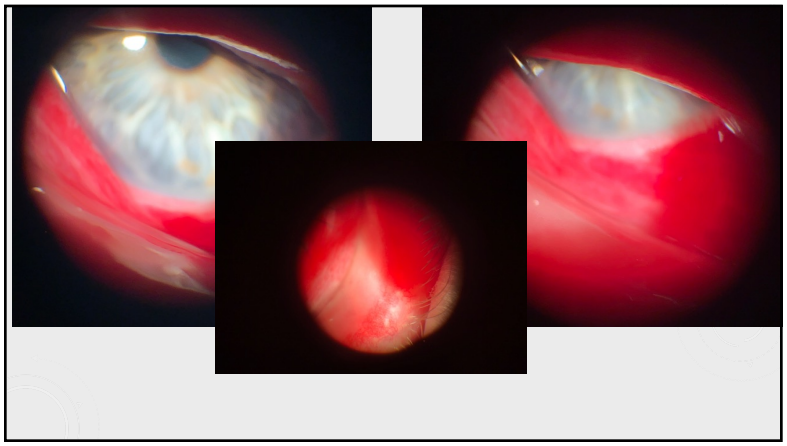

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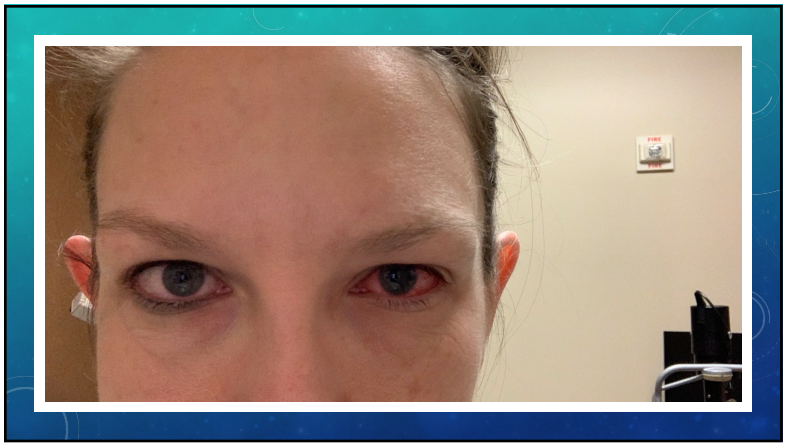
ADENOVIRUS

- Caused by a virus
  - 6 subgenera and 53 serotypes
- Symptoms: redness, itching, photophobia, tearing, aching, foreign body sensation, blurred vision
  - Fever, headache, fatigue (flu like symptoms)
- Signs
  - chemosis, follicles, swollen lymph nodes, discharge, sub epithelia infiltrates, pseudomembranes

60



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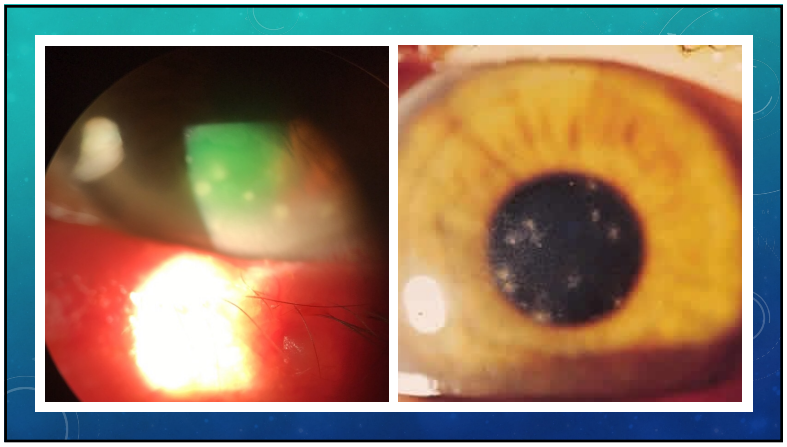


62

Highly contagious.

Adenoplus

- Tests for most common serotypes 3,4,8,11,19,37

Rule of 7's

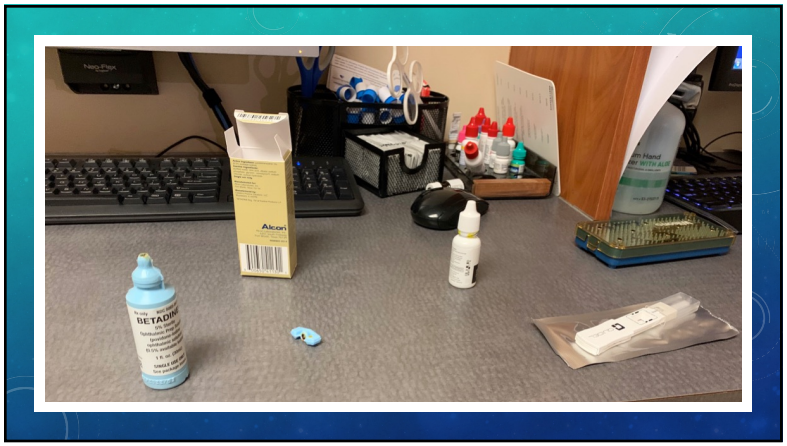
- Contagious for 7 days prior to signs and symptoms
- Contagious for 7-14 days after signs and symptoms
- Signs and symptoms will persist for 21 days after they start

63

TREATMENT

- In office
  - Betadine wash
  - Removal of pseudomembranes
- At Home:
  - Topical antivirals
    - Decrease viral load?
  - Topical NSAID
  - Topical Steroid
    - Prolong viral shedding?
  - Lubrication with artificial tears
  - Cold Compresses

64



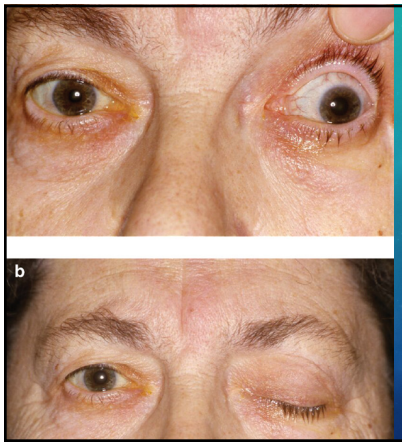
65

Case 6:

I've got. . . Double vision

- 68 year old male sudden onset of diplopia along with a left eye lid droop starting 4 days ago.
- When lid is lifted diplopia resolves when either eye is covered
  - The images are diagonal to each other
- Pt is an uncontrolled Type 2 DM x 15 years, last A1C 3 months ago of 12%

66



CRANIAL NERVE 3 PALSY

- Eye is turned "down and out"
  - Abducens and superior oblique still function
- Eyelid is shut
  - Levator palperae the lid retractor is paralyzed
- Possible pupil involvement
  - Pupil sparing (normal reaction)
  - Non-Pupil sparing (affected pupil is not reactive to light shone in either eye)

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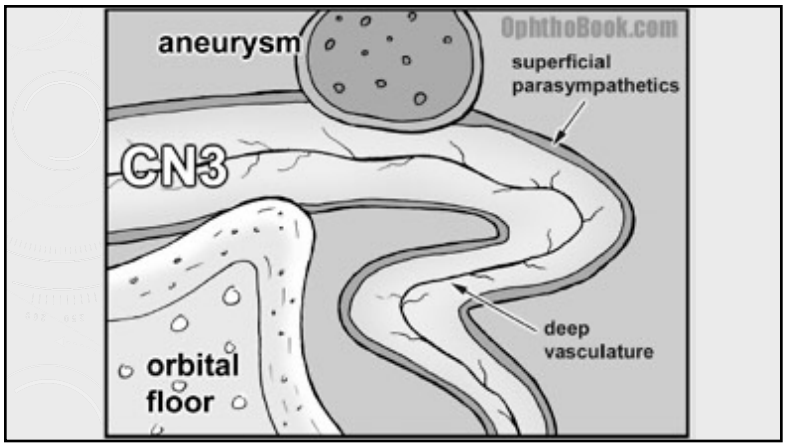
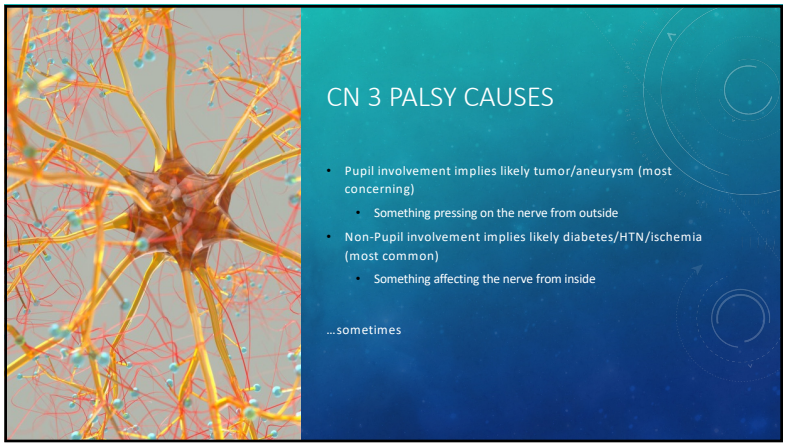
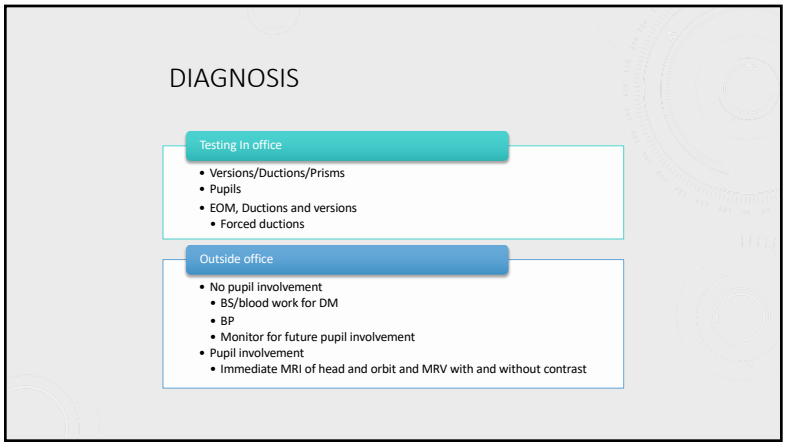
68


aneurysm
OphthoBook.com
superficial
parasympathetics
CN3
deep
vasculature
orbital
floor

69


CN 3 PALSY CAUSES
• Pupil involvement implies likely tumor/aneurysm (most concerning)
• Something pressing on the nerve from outside
• Non-Pupil involvement implies likely diabetes/HTN/ischemia (most common)
• Something affecting the nerve from inside
…sometimes

70


DIAGNOSIS
Testing In office
• Versions/Ductions/Prisms
• Pupils
• EOM, Ductions and versions
• Forced ductions
Outside office
• No pupil involvement
• BS/blood work for DM
• BP
• Monitor for future pupil involvement
• Pupil involvement
• Immediate MRI of head and orbit and MRV with and without contrast

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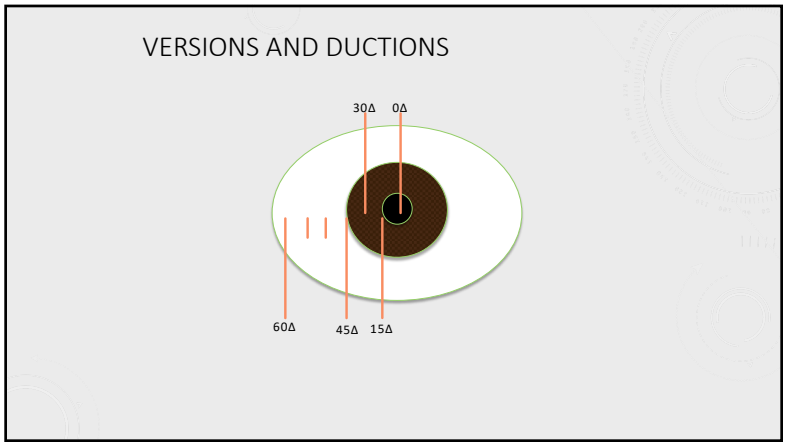
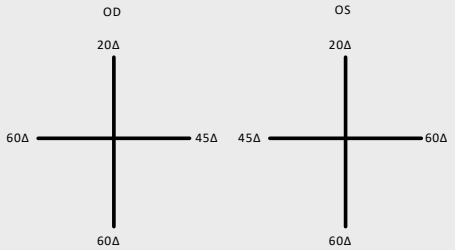

VERSIONS AND DUCTIONS
30Δ
0Δ
60Δ
45Δ
15Δ

72

73

HOW TO DOCUMENT



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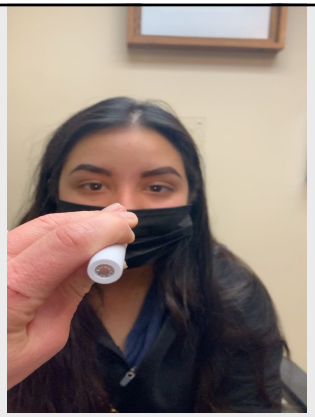

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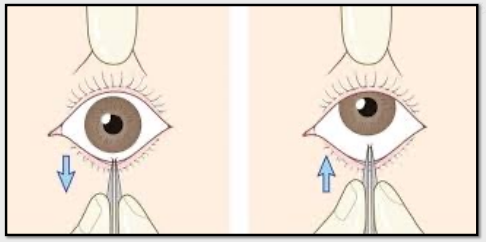
FORCED DUCTIONS



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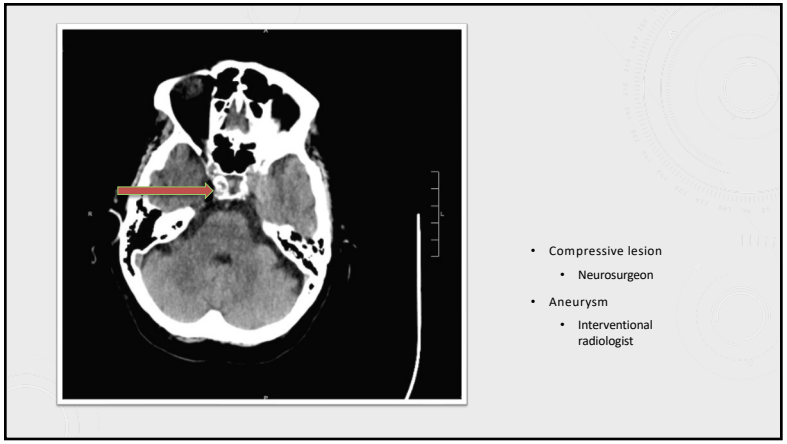

- Compressive lesion
  - Neurosurgeon
- Aneurysm
  - Interventional radiologist

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INTERNAL CAROTID ANEURYSM

- Urgent stenting

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READING REPORTS

MR MRV HEAD W/WO CONTRAST
MR21062100S305

Date / Time:
06/21/2021
3:36 PM

EXAM: MR MRV HEAD W/WO CONTRAST

CLINICAL INDICATION/HISTORY: H47.013: Ischemic optic neuropathy, bilateral
> Additional: Bilateral visual field defects, breast cancer

COMPARISON: None.
> Reference Exam: Brain MRI same day

TECHNIQUE: 2-D time of flight coronally acquired MRV was performed intracranially with multiple MIP reconstruction images obtained. Following gadolinium administration, fat saturated coronally acquired time-of-flight acquisition obtained with multiple MIP reconstructions obtained.

FINDINGS:

Normal appearing superior and inferior sagittal sinuses, normal-appearing bilateral transverse and sigmoid dural venous sinuses, left side slightly dominant. Visualized upper jugular veins unremarkable. No cortical venous abnormality.

IMPRESSION:

6/23/2021
S, PAUL G [PG... Page 2 of 2

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lacuner infarct lateral right basal ganglia. No cortical signal abnormality. No new mass hemorrhage edema or mass effect.

Ventricles and sulci: Normal. No significant atrophy given age.

Extra-axial: No extra-axial fluid collection or mass is noted.

Contrast:There is no abnormal enhancement.

Brain vasculature: No vascular abnormality is appreciated on this routine brain MR examination.

Craniocervical junction: Normal.

Skull base, extracranial and calvarium: Stable moderate retention cyst or polyp inferior left maxillary sinus with bilateral lens implants. IACs and mastoids unremarkable. Stable mildly expanded partial empty sella. There is enhancing mild low T1 marrow signal lesion right posterior frontal skull near the vertex, 10 mm in diameter. No other discrete concerning skull lesion.

IMPRESSION

1. No evidence of acute infarct or other acute intracranial finding. No evidence of intracranial metastatic disease.
2. New tiny chronic left cerebellar infarct. Small right basal ganglia chronic lacunar infarct. Slight progression of white matter signal changes likely chronic microvascular ischemic disease.
3. 1 cm enhancing skull lesion posterior right frontal skull near the vertex concerning for osseous metastatic lesion. Further evaluation nuclear medicine bone scan suggested to evaluate for other lesions.

EXAM: MRI brain without and with gadolinium

CLINICAL INDICATION/HISTORY: H47.013: Ischemic optic neuropathy, bilateral
> Additional: Bilateral visual field defects, breast cancer

COMPARISON: 8/13/2014
> Reference Exam: None.

TECHNIQUE: Sagittal FLAIRT1, axial T1, T2, FLAIR, T2 gradient, and diffusion sequences obtained of the brain. Following gadolinium administration, axial and coronal T1 sequences obtained. Additional axial T1 post gadolinium magnetization transfer sequence obtained. Imaging was performed on a 3 Tesla Siemens Magnetom Vida scanner.

FINDINGS:

Diffusion: There are no areas of restricted diffusion, no evidence of an acute infarction.

Brain parenchyma: New tiny chronic infarct posterior left cerebellum. Slight increased mild confluent and multifocal increased T2 and FLAIR signal periventricular and deep cerebral white matter including subcortical white matter. Stable small T2 hyperintense foci bilateral basal ganglia including likely chronic

80

"Hey so I started to notice these weird spots* in my vision, should I come in?"

*insert squiggly lines, floaters, cobwebs, blobs, gnats, worms, etc.

81

FLASHES AND FLOATERS

- What are you noticing?
  - Are there flashes?
    - When? How often?
  - Is there a curtain or veil?
- Which eye?
- When did they start?
- When was the most recent flash?
- Any recent head trauma or accident?

- Urgent
- Same day if possible
- Posterior Vitreous Detachment (PVD)
- Establish if NEW

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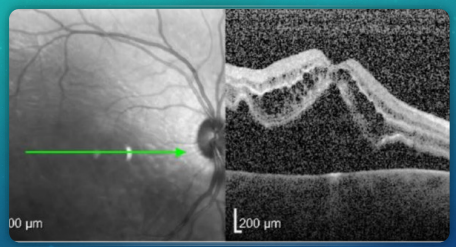

FLASHES AND FLOATERS

- Mac off Retinal Detachment

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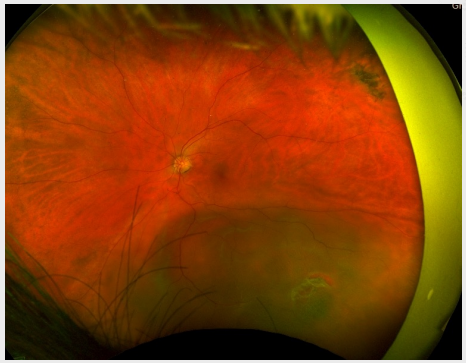

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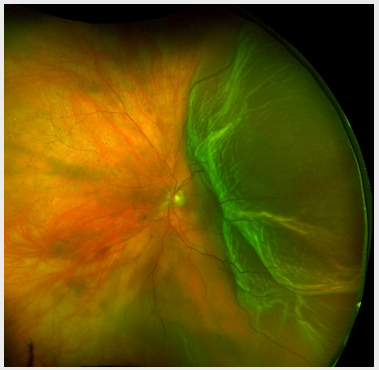

85

Case 7:

- 18 Year old Female
- Patient referred from Cheyenne for eval of possible retinoschisis vs RD.
- Patient reports flashes and floaters in right eye since last Thursday. Has chronic floaters but may have an increase.
- -9.0 myope
- Exam with IT RD OD with temporal hole. Lattice Superior. Lattice OS as well.

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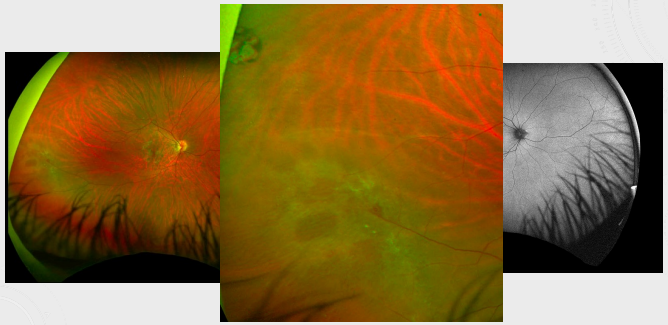

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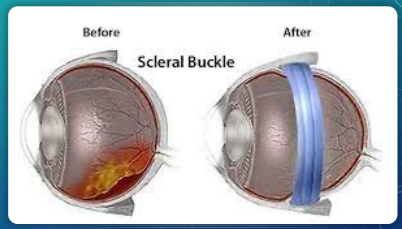
TO RETINA WE GO

- OD: RD IT, peripheral cystoid degeneration
  OS: peripheral cystoid degeneration
- Treatment?
- Scleral buckle OD and laser retinopexy OU within 1 week



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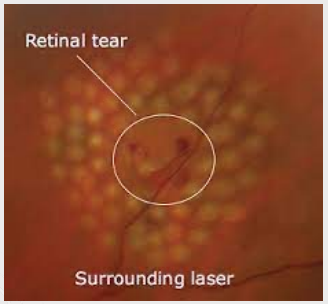
LASER RETINOPEXY



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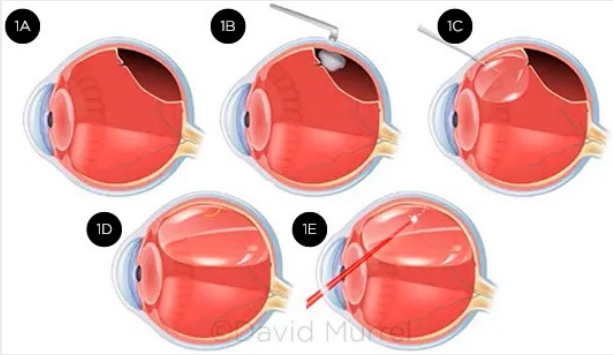
PPV WITH RD REPAIR



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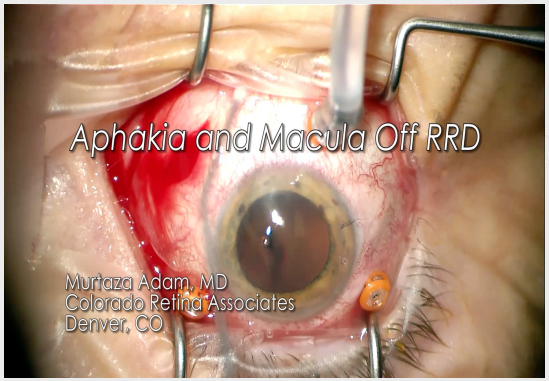

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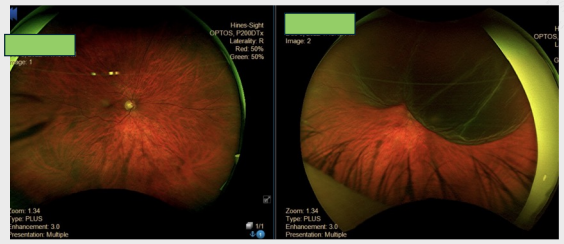
68 YOM DECREASE VISION 3 DAYS LOSS OF 2/3 VISION PURPLE BUBBLES



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TAKE HOME POINTS

- Regardless what the emergency is, you got this.
- Take time to evaluate and decide what is needed
- 5 W's
- Refer out or phone a friend if needed

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QUESTIONS?

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THANK YOU!

Dr.CeceliaKoetting@gmail.com

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