

My Doc Told Me to Get an Eye Exam Because.....

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- Professor, UEI

Drugs can blind you (the patient)

- Cataract
- Glaucoma
- Uveitis
- Dry eye
- Macular disease
- Optic neuropathies
- Stroke (ischemic disease)
- Ocular heme-alcohol + tylenol

KNOW THY PATIENT

- Individuals ARE different
- HISTORY, HISTORY HISTORY@@@
- Medical
- Eye
- Allergy
- Medications
- Family
- Social
- Demographics

GET FOCUSED

- WHY ARE YOU HERE?
- Take a thorough HISTORIES
- What are you taking
- What are you using it for
- What are your SX
- Know your protocols

CASE #1:

The latent hyperope/macular hole/diabetic macular edema patient

"My doctor told me to get my vision checked"

- 29 Y/O Asian female presents with CC: "My vision isn't right" - "IT'S BLURRY"
- Feels like its getting worse for the last 3 months
- My Doctor told me to have my eyes checked because of my medications

Medical HX Doctor #1

- "Lung infection" TX X 6 months
- No other significant HX
- MEDS: rifampin, ethambutol, clarithromycin
- Allergies: None
- Fm HX: Type II DM-F
- Social HX: NEG
- Fm Oc HX: NEG

The exam 10/2011

- BVA: 20/25-2 OU
- Current RX; (+) 0.50 OU
- OD: 20/20-2 OS 20/25-1
- Refrac. +0.75-0.25 X 165 20/20-2
- +0.75-0.25 X 10 20/25 -1
- Pupils: PERRLA (-) APD, IOP 12 OU
- DFE: WNL C/D: 0.3/0.3 OU
- DX: HYPEROPE-told everything is OK
- Gave new RX

DR. #2 4/2012

- HX and complaint: see Dr. #1: My vision is getting worse and my doctor told me to get an eye exam
 - Acuity with RX: 20/25-2 OU
 - Refraction: (+) 150- 0.50 X 10 20/25
 - (+) 150 – 0.25 X 160 20/25
- A/P: Hyperope/ made new RX

2 weeks later: Doctor #3

- MY new glasses don't work-they make me blurrier
- HX: Dr. #3 has records from #2
- BVA: Best with original RX
- OD 20/30
- OS 20/30
- Amsler grid: (central blur OU)
- A/P: "Bilateral macular holes": "see an ophthalmologist"-no appt made for patient

2 weeks later: Back to Dr. #1

- Same complaint with HX of other visits
- BVA: OD 20/50
- OS 20/80
- Macular OCT performed
- Result: NML
- A/P: Diabetic macular edema
- Consult to a PCP for undiagnosed diabetes

1 week later: PCP report:

- NO DIABETES
- Repeats OCT; NML
- Refers to RETINA: Appt made-non-emergent referral

10 days later: Retina evaluation

- BVA: OD 20/200
- OS 20/400
- Color vision: Missed (3) plates OD and (all) plates OS
- (-) APD
- Temporal pallor of OS disc
- VF's: Paracentral defects OU, OS > OD
- A/P.....?

WHAT DO YOU DO?

- 1. Lower IOP at least 30%
- 2. Get MS consult
- 3. Advise pulmonologist to DC ethambutol
- 4. Advise patient to start drinking and smoking
- 5. Start ARED's vitamins
- 6. Increase her plus at near and start VT

KNOW YOUR PROTOCOLS THE BLINDING DRUGS

- HYDROXYCHLOROQUINE
- VIAGRA
- CORTICOSTEROIDS
- AMIODARONE
- TAMOXIFEN
- ETHAMBUTOL

WHAT DO YOU THINK?

- 1. LATENT HYPEROPIA
- 2. AMD
- 3. TOBACCO/ALCOHOL AMBLYOPIA
- 4. ETHAMBUTOL TOXICITY
- 5. BILATERAL MACULAR HOLES
- 6. LOW TENSION GLAUCOMA
- 7. MS/ optic neuritis

FIRST: LISTEN TO YOUR PATIENT

- **MY DOCTOR TOLD ME TO HAVE MY EYES CHECKED BECAUSE OF THE MEDICATIONS THAT I AM USING**
- **MY VISION IS NOT RIGHT**

WHAT DO YOU DO?

- BVA
- COLOR VISION (D15)
- VF'S: 24-2
- EDUCATE
- NOTE ANY DISTURBANCE OF VISION
- ADVISE DC OF ETHAMBUTOL IMMEDIATELY
- CV MOST RELIABLE PREDICTOR

HEY DOC-EVERYTHING LOOKS BLUE!

- 71 Y/O male for general exam complains of occasional color disturbance associated with “migraine-like” HA
- Occurs X 2 months-”at night”
- No prior HX of vascular HA
- No decrease or loss in vision
- No hx TIA

RESULTS??

- **At the end of one year they still have glaucoma**
- **BUT THEY DON’T CARE!!**
- **Seriously-Studies of blood flow effects may help in management of optic nerve perfusion and explain Viagra’s side-effects**

The mechanism, the protocol

- Local loss of perfusion/hypotensive event
- STOP THE DRUG
- ASSESS THE DAMAGE
- DO A VF
- Monitor nerve palsies
- Look for multiple neuro deficits
- Bad things get worse

Viagra-The Good

- Affects nitric oxide receptors and may affect ocular blood flow- Useful in open angle glaucoma?
- In a recent study 100 male glaucoma patients take Viagra for one year

Viagra-The Bad

- Has produced anterior ischemic neuropathy
- Has produced pupil-sparing third nerve palsy
- Associated with ocular vascular events
- Vascular adverse effects increase dramatically when used with nitrates@@@

Anti-anginal Agents

- **Nitrates**
- **Coronary artery dilators**

The Breast Cancer Wonder Drug

- Reduces incidence of breast cancer by up to 75%
- Originally used in elderly, post-menopausal women to prevent recurrence of cancer
- Now in young women for prophylaxis
- Produces vision loss?

Tamoxifen Maculopathy@@@

- Occurs in 6% of patients within 6 months of low dose therapy (20mg/D)
- Reversible early, not reversible later
- White crystalline macular deposits
- Nobody knows about this

Patient Management

- Pre-TX baseline evaluation with emphasis on macular function and appearance
- Evaluate every 6 months thereafter or prn decrease in central acuity
- Also monitor for cataract@@@

Plaquenil: NEW GUIDELINES: KNOW YOUR NO'S

- NO COLOR
- NO PHOTO
- NO AMSLER
- NO WAIT FOR VA LOSS
- VA LOSS STOPS AFTER DRUG DISCONTINUED – NOOOOOOOOO
- NEW DOSING NOT BASED ON IDEAL WEIGHT-SOMETIMES?

NEW GUIDELINES: KNOW YOUR YES'S

- DOSAGE REDUCED FROM 6.5MG/KG TO 5MG/KG OR LESS , ACTUAL WEIGHT, NOT IDEAL WEIGHT
- BASELINE EVALUATION
- ANNUAL EXAMS AFTER 5 YEARS UNLESS HIGH RISK
- CUMULATIVE DOSE CALCULATION
- ASSESS PATIENTS RISK FACTORS
- VF-10-2, Asian patients need extra-macular tests, or Multi-focal ERG's/fundus auto fluorescence
- OCT-SPECTRAL DOMAIN-PIL
- COUNCIL PATIENT
- COMMUNICATE WITH PRESCRIBER ON DOSAGE GUIDELINES

RISK FACTORS

- > 5 YEARS TX
 - DOSAGE > 5mg/kg
 - RENAL OR HEPATIC DISEASE
 - RETINAL DISEASE
 - HIGH BMI
 - OVER 60
 - CUMULATIVE DOSE OF 1000 GMS
 - EXAMPLE: 10 YEARS TX AT 400MG/D = CD = $10 \times 365 \times 0.4\text{GM} = 1,460 \text{ GMS CD}$
- CHECK EVERY 6 MONTHS AT OLD DOSE OR YEARLY AT NEW LOWER DOSE

THE LIST

- Hypertension: BRVO/CRVO
- Diabetes
- Toxoplasmosis
- CMV retinitis
- Drug induced

Recommendations on screening for chloroquine and hydroxychloroquine retinopathy-AAO (2016 revision) Risk Reduction

- At 5mg/kg or less risk of maculopathy at 5 years is 1% and at 10 years 2%-Risk increases to 20% after 20 years, but only 4% risk of converting if normal at 20 years
- Main Risk is dose and duration-additional tamoxifen use and renal disease
- Chloroquine dosage suggested is now 2.3mg/kg or less

It's all about the HX

- Social HX
- HIV (sentinal disorders)
- Drugs
- MANAGEMENT?

SAMPLE CASE-THE RED EYE KID

- 10 Y/O PRESENTS WITH ACUTE RED EYE PAIN
- EYE ACHES X 24 HOURS
- 7/10 PAIN RATING
- NAUSEA/VOMITING X 24 HOURS
- 1ST EPISODE
- OS VS decreasing X 1 wk
- VA 20/20 PLANO OD
- -3.00 SPH 20/60 OS
- MED HX: EPILEPSY
- ER DX: Pink eye/Gentamycin drops/now worse

TESTS

- PUPILS: 5MM/6MM +3RX/+1RX (-) APD
- (+) 2-3 CELL AND FLARE
- (+) 1-2 CORNEAL EDEMA

Differential DX?

1. Iritis
2. Angle closure glaucoma
3. "Pink eye"
4. Cataract
5. Bacterial endo-ophthalmitis
6. Need more information

What would you like to know?

- IOP: 16 OD 68 OS
- Shallow chambers OS > > > OD
- DON'T DILATE THIS EYE

More info

Meds: @@@@

- Topomax
- DX: Choroidal effusion OS
- Acute myopia/secondary angle closure glc within 1 month of start of TX

Case #2:

The "atypical, I think we need a corneal consult" conjunctivitis case-or "take (2) drops of this artificial tear and call me in the morning-if you're still alive" case

Visit #1: AT COMMUNITY CLINIC
5/25

- 60 Y/O HF
- CC: "MY EYES ARE RED, I SEE DOUBLE AND I HAVE HAD DAILY SEVERE HEADACHES FOR THE LAST (5) MONTHS"

Doctor #1: I think you have.....

- ATYPICAL CONJUNCTIVITIS
- DIPLOPIA: UNKNOWN ETIOLOGY
- TX: PRED FORTE BID OU
- REFER TO UEI FOR EVALUATION

Visit #2: UEI
6/6

- CC: Referred from community clinic for red eye X 5 months and diplopia X 1 month
- Using pred forte BID X 2 weeks-no help
- Med HX: Type II DM X 4 yrs and hypertensive
- Hospitalized 2 months earlier for BP

Visit #2 (cont'd)

- Meds: Olmesartan (BP) and metformin (DM)
- NKDA
- FM HX: (-)
- Social HX: (-)
- BVA: 20/20 – OD/OS Hyperopic/astig
- BP: 136/77

Visit #2 (cont'd)

- HVF-30-2:
- OD Scattered defects, judged unreliable
- OS: Scattered defects, judged reliable
- DR# 2: I THINK YOU HAVE:
- DX: Unspecified conjunctivitis/
- (L) 6th nerve palsy secondary to BP/DM
- PLAN: DC PRED, start artificial tears
- Wear eye patch for diplopia/RTC if worsens
- Refer to cornea specialist for red eye (3) weeks

Visit #2 (cont'd)

- IOP: 17/16
- CF's and pupils: Normal
- SLE: (+) 4 conjunctival hyperemia OU
- (+) 1-2 chemosis OU
- (-) C or F
- Cornea clear
- EOM's" Mild? Restriction in (L) gaze
- Lids:Ptosis OS

Visit #3 UEI 6/26

- Reason for visit: Recheck red eyes
- CC: "HA's, red eyes and diplopia are worse"
- SLE: Corkscrew vessels OU
- IOP: 32/24
- EOM: Bilateral 6th N palsy
- CF/Pupils: normal
- DFE: Venous congestionOU

Assessment and Plan (take your pick)

1. Really bad conjunctivitis / Restart Pred forte
2. Episcleritis / Restart pred forte
- 3.Scleritis / restart Pred forte
4. Angle closure GLC/ Diamox , oral glycerin, and topical brimonidine STAT
5. Immediate referral to corneal specialist STAT
6. Needs MRI/MRA/MRV STAT

THE CASE OF THE CLOUDED CORNEA

- 64 y/o male without complaints
- BVA: 20/25 OU
- Meds: Cholestyramine resin-Lipids
Niacin-Lipids
Cordarone-Arrhythmia
Lasix-Hypertension
- SLE: "Strange corneal deposits"

Watch for the anti-arrhythmic Agents@@@

- All can produce reversible decrease in acuity
- Optic neuritis has occurred
- Permanent loss of vision with amiodarone
- Amiodarone patients identified by presence of corneal verticillata
- Loss of vision a result of TOXIC OPTIC NEUROPATHY
- Amiodarone toxicity is not predictable-must monitor patient for vision/VF loss

Medication HX

- Tetracycline 250mg TID
- Topical Benzoyl peroxide
- Accutane tablets daily

BVA : 20/20

DFE: Bilateral papilledema

NEURO CONSULT?? MRI??

Is she gonna die!!

THE CASE OF THE SWOLLEN NERVE

- 16 y/o female general and CL exam
- severe HA's X 6-8 weeks-is it her glasses
- Med HX: Acne
- Asthma
- Obesity

The Hallucinating Senior Citizen

- 72 y/o male - Visual disturbance@@@“Lights look like covered in snow with halos”
- Vision getting blurry X 2 months
- Told by primary care doc to get new glasses

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Refer to OD/MD

- Fellowship at UCSF: Ocular inflammation for evaluation and TX
- Advised patient was a steroid responder