Common Eye Conditions Every Primary Care Clinician Should Know

Cynthia S. Chiu, MD, FACS
Professor
UCSF Department of Ophthalmology

UCSF Family Medicine Board Review
March 7, 2017
Disclosure

I have no financial interest in any of the products mentioned in this presentation.
The Eye Exam

- Eye Vital Sign
- Near Vision Card
- Held at 14 inches
- Glasses as needed
Pupils

- Look for afferent pupillary defect
- Swinging flashlight test
- +APD indicates optic nerve or large retinal lesion
Motility

- Six extraocular muscles
- Test cardinal fields of gaze
Confrontational Visual Fields

- Cover eyes on same side
- Hold fingers midway between
- Normal per eye: 60-60-60-90

Penlight Exam

- Lids
- Lashes
- Conjunctiva/Sclera
- Cornea
- Iris/Pupil
- Lens
- Puncta
Anterior Chamber Depth

- Deep chamber: illumination of nasal iris
- Shallow chamber: shadow on nasal iris
- Dilation: Phenylephrine 2.5%, Tropicamide 1%

http://iei.ico.edu/images/anatomy.jpg
Fundoscopy

- PanOptic or Direct Ophthalmoscope
- Evaluate optic nerve, retinal vessels, macula
Primary Care Ophthalmology

http://www.factzoo.com/sites/all/img/reptiles/chameleon-eyes.jpg
The Red Eye
Infectious Conjunctivitis

**VIRAL:**
- Clear/mucoid discharge
- Lymphadenopathy
- Contagious!
- Treat for comfort

**BACTERIAL:**
- Purulent discharge
- Culture: Staph, Strep, Hflu
  - PolyTrim or Vigamox
  - **NOT** Tobra or Gent
- GC, chlamydia (IM/PO)
Allergic Conjunctivitis

- History of atopy
- Conjunctival edema
- Itchy!

- Topical antihistamines
  - Zaditor
  - Patanol/Pataday/Pazeo

- Visine tachyphylaxis
Blepharitis

- Redness, itching, “grit”, dry eyes
- Rosacea, Staph, Demadex
- Warm compresses, baby shampoo, artificial tears
- Doxycycline, Azithromycin

http://www.stop-rosacea.com/
Dry Eye Syndrome

- Burning, stinging, excess tearing (wind or cold)
-Blurry vision that improves with blinking
- Artificial tears, immunologics (Restasis, Xiidra)
Herpes Simplex

- When to refer: V1, V2, red eye, eye pain, change in vision
- Acyclovir
Herpes Zoster

- Hutchinson’s sign: nasociliary nerve
- Treat Post-Herpetic Neuralgia: Lyrica, Neurontin, TCA’s
Uveitis

- Inflammation of vascular tissue
- Auto-immune
- Infectious
- Toxic
- Masquerade
- May require immunosuppression
Angle Closure Glaucoma

- Headache
- Loss of vision
- Firm eye
- IV Diamox, Mannitol
- Glaucoma gtt’s
- Surgical treatment
Subconjunctival Hemorrhage

- Coughing/sneezing, HTN, anti-coagulation, eye rubbing, spontaneous
- Not dangerous unless vision has changed
- In the setting of trauma: refer

http://sixfishes.com/_cache/assets/img/441-r-w320-q75-m1445457194.jpg
Corneal Abrasion

- Pain!
- Loss of epithelium
- Not infected
- Erythromycin ung
- PolyTrim gtt
- Artificial Tears
- Patching
Corneal Foreign Body

- Iron is toxic
- Surgical treatment
Hyphema

- Severe eye trauma
- Risk of rebleed
- Risk of glaucoma
Ruptured Globe

- Peaked pupil
- Brown tissue outside the eye
- CT scan NOT MRI
- Fox shield, NPO
Common Diseases of Aging
Cataract

- Painless progressive loss of vision with age
- Also caused by DM, XRT, trauma, medications
- Difficulty reading, driving, glare
- Outpatient surgery
Glaucoma

- Chronic progressive optic neuropathy
- Loss of visual field
- Risk factors: age, tobacco, race, family hx
- Medications may have systemic interactions
Macular Degeneration

- Risk factors: age, UV, tobacco, Family Hx
- Loss of central vision
- Dry form: AREDS vitamins, stop smoking
- Wet form: anti-VEGF injections
Disorders of the Eyelid and Orbit
Ptosis

- Loosening of eyelid muscle, extra skin
- Surgical repair

Trichiasis

- Eyelash growing inward toward the eye
- Epilation
- Electrolysis

http://healthfixit.com/wp-content/uploads/2016/01/Trichiasis-or-Ingrown-Eyelash-1.jpg
Ectropion/Entropion

- Ectropion: rotation of eyelid outward
- Entropion: rotation of eyelid inward
- Irritation of the ocular surface
- Surgical repair

http://www.shropshireeyecare.co.uk/sites/default/files/Bilateral%20LL%20Ectropion_2_0.jpeg
Chalazion

- Blocked oil gland
- Inflammation
- Warm compresses
- Incision/curettage
Cellulitis

- Preseptal vs Orbital

- Preseptal: full EOM, no proptosis, quiet eye
  - Treat PO Abx

- Orbital: proptosis, strabismus, inflamed eye
  - Treat IV ABx
Thyroid Orbitopathy

- Proptosis
- Strabismus/Diplopia
- Corneal exposure
- Optic nerve compression
- 131-I may aggravate
- Surgical treatment
Disorders of the Retina
Posterior Vitreous Detachment

- Separation of vitreous from optic nerve and retina
- Sudden appearance of floaters (ring/lines)
- Small risk of retinal tear when first occurs, otherwise benign
Retinal Detachment

- Flashes/Floaters
- Loss of vision/field
- Sudden, painless
- Surgical treatment
Diabetic Retinopathy

- Microvascular disease
- Bleeding
- Macular edema
- Neovascularization
- Glucose/BP control
- Laser ablation
- Anti-VEGF
Hypertensive Retinopathy

- Mild: arteriolar narrowing
- Mod: cotton wool spots, hemorrhages
- Severe: disc edema, vessel leakage, infarcts
HIV/CMV Retinopathy

- Microvascular disease
- Annual exam if CD4 > 200
- CMV retinitis

http://depts.washington.edu/hivaid/images/oit/oit_c7_d06.jpg
Retinal Artery Occlusion

- Embolic: cardiac echo, carotid doppler
- Vasculitic (GCA)
Retinal Vein Occlusion

- HTN/hyperlipidemia
- Glaucoma
- Young patients: hypercoagulable
Neuro-Ophthalmalmology
- Homonymous field defect
- Location of lesion is contralateral + upside-down
Pituitary Adenoma

- Compression of nasal fibers at optic chiasm
- Bitemporal hemianopia
Temporal Arteritis

- Acute vision loss
- Headache, jaw claudication, scalp tenderness, proximal myalgias, constitutional symptoms
- ESR and CRP
- Prednisone 100mg QD
- Temporal artery biopsy
Optic Neuritis

- Loss of vision
- Pain with EOM
- +/- disc edema
- Multiple Sclerosis
- Steroids
Pseudotumor Cerebri

- Headache, tinnitus
- Papilledema
- Vision loss

- Female, overweight
- Medication-induced

- LP: opening pressure

http://www.caleyes.com/images/papilledema-image.jpg
Horner Syndrome

- Anisocoria in the dark
- Mild ptosis
- Acute and painful: R/O carotid dissection

http://www.mrcophth.com/oculoplasticsgallery/traumatichorner/horner.jpg
Third Nerve Palsy

- Anisocoria in the light
- Severe Ptosis
- EOM paresis
- Microvascular
- PCA/PCom aneurysm
Thank You!

http://blog.omy.sg/dingan/files/2009/05/bob.jpg
References

- http://www.ueseyecare.com/images/photos/allergic_conjunctivitis_l.jpg
- http://www.ueseyecare.com/images/photos/viral_conjunctivitis_l.jpg
- http://www.aafp.org/afp/20030401/1481_f3.jpg
- http://eyemicrobiology.upmc.com/images/Sub/PhotoEyeDendrite.jpg
- http://www.medicalskincare.be/images/content/herpes03.jpg
- http://eyelearn.med.utoronto.ca/Lectures04-05/RedEye/images/11Kera2.jpg
- http://www.nova.edu/~albert/ScleritisWeb.jpg
- http://www.mrcophth.com/externaleyediseases/sp.jpg
- http://www.jeremydiamond.co.uk/graphics/cataract_eye.jpg
- http://technology.kingston.ac.uk/dirc/medical/images/cataract2.jpg
- http://www.drloden.com/Pages/Pics/cataract.gif
- http://www.en.harvard.edu/faculty/peli/Ophthalm_Mngt_0803_files/xNat.beauty.jpg
- http://www.laskinstitute.org/Glaucoma_whatis.html
References

- http://hubnet.buffalo.edu/ophthalmology/site/Home/Eye_Disorders/Hypertensive_retinopathy.jpg
- http://www.mircophth.com/retinacases/MMV.gif
- http://www.opt.indiana.edu/ce/ants/graphs/cwsails.jpg
- http://www.opt.pacificu.edu/ce/catalog/10701-PS/4hemorr.jpg
- http://webeye.ophth.uiowa.edu/dept/CVA/images/CVAfig1b.jpg
- http://www.ophthalmic_hypermontgomery.com/tutorials/oculoplastics/temporal_arteritis/slides/Slide1.jpg
- http://content.lib.utah.edu/EHSL-WHI/image/con124.jpg
- http://www.atlasophthalmology.com/atlasimg/1396_6_low_thumb.jpg
- http://www.tedmontgomery.com/the_eye/eyephotos/pcs/CentralRetinalArteryOcclusion.jpg
- http://www.drugdigest.org/images/pillimages/A0315100.jpg
- http://www.aafa.org/images/eye.jpg
- http://eyelearn.med.utoronto.ca/Lectures02-03/RedEye/images/RedEye_033.jpg
- http://www.varja.org/corneal_foreign_body_2.jpg
- http://www.varga.org/corneal_foreign_body_2.jpg
- http://www.opt.pacificu.edu/ce/catalog/10310-SD/Trauma%20Pictures/Hyphema.jpg
- http://www.tedmontgomery.com/the_eye/eyephotos/pcs/Chalazion.jpg
- http://medicine.ucsd.edu/clinicalimg/eye-periorbital-cellulitis1.jpg
- http://eyelearn.med.utoronto.ca/Lectures05-06/RedEye/images/RedEye_010.jpg