Can YOU Walk the EYE Doc Talk??

Dr. Kris Kerestan
krisgarbig@fuse.net

Dr. Kerestan is a member of the Alcon Vision Care Speakers Alliance. Alcon, however, has no financial interest in this course or its content.

The Language of Eye Care

- Clinical Optometric Abbreviations
- Clinical Optometric Terminology
- Medication Rx Abbreviations

Clinical Optometric Abbreviations

Accommodative Insufficiency

- Inability to maintain focus on print at near
- Signs and Symptoms
  - Blur N/D
  - Eyestrain / Asthenopia
  - Headache
  - Difficulty reading
  - Motion sickness
- Treatment
  - VT – Success rate of close to 90%
  - Near rx

Age-Related Macular Degeneration

- Acquired retinal disorder caused by atrophy and degeneration of the central retina
- Signs and Symptoms:
  - Gradual onset of blurred vision
  - Metamorphopsia
  - Pigment degeneration
  - Drusen
- Treatment/Prevention
  - Nutrition-Lutein and Zeaxanthin
  - Smoking Cessation/Sun protection
  - Blue blocking lenses

AMD

- AMD
  - Age-Related Macular Degeneration
  - Acquired retinal disorder caused by atrophy and degeneration of the central retina
  - Signs and Symptoms:
    - Gradual onset of blurred vision
    - Metamorphopsia
    - Pigment degeneration
    - Drusen
  - Treatment/Prevention
    - Nutrition-Lutein and Zeaxanthin
    - Smoking Cessation/Sun protection
    - Blue blocking lenses

Clinical Optometric Abbreviations

- AI
  - Accommodative Insufficiency
    - Inability to maintain focus on print at near
    - Signs and Symptoms
      - Blur N/D
      - Eyestrain / Asthenopia
      - Headache
      - Difficulty reading
      - Motion sickness
    - Treatment
      - VT – Success rate of close to 90%
      - Near rx
Amps

**Amplitudes of Accommodation**
- Maximum increase in focusing power that an eye can achieve by switching from D to N
- Measurement via PD rule or Accom. Rod
- Age dependent

---

BIO

**Binocular Indirect Ophthalmoscope**
- Light source used with a handheld +14D or +20D condensing lens.
- Provides a stereoscopic view of the retina.
- Image is real and inverted

---

ATR/WTR

**Against the Rule**—when the axis of the minus cylinder is orientated at X 90
- Adults

**With the Rule**—when the axis of the minus cylinder is orientated at X 180
- Children

---

BDR/NPDR

**Background Diabetic Retinopathy**
**Non-Proliferative Diabetic Retinopathy**
- Usually no symptoms
- Fundus Photos—Microaneurysms/Dot/Blot hemorrhages
- OCT—Macular edema (10% of all diabetics)
- FA—Retinal ischemia (Optos Daytona)

---

C:D ratio

**Cup:Disc ratio of the Optic Nerve**
- Measurement of size of Optic Cup relative to overall diameter of Optic Disc
- Previously used as major indicator of GLA

---

CI

**Convergence Insufficiency**
- Inability to move the eyes inward or cross
- Signs and Symptoms:
  - Diplopia
  - Asthenopia (eye strain)
  - Transient blurred vision
  - Difficulty sustaining near-visual function
  - Headache
- Treatment:
  - VT—up to 75% success rate
CVS

**Computer Vision Syndrome**

- Signs and symptoms
  - Eyestrain
  - Headaches
  - Blurred vision
  - Dry eyes
  - Neck and shoulder pain

DES

**Digital Eye Strain**

- 30% of all adults spend 9+ hrs/day on DD
- 61% of adults experience DES (Increase since 2012)
  - 32.8% eye strain
  - 32.6% neck, shoulder, back pain
  - 24% HA
  - 23% Blurred vision
  - 22.8% Dry eye
- NOMOphobia

DFE

**Dilated Fundus Exam**

- Requires use of mydriatic agent
  - Tropicamide 0.5% or 1.0%
  - Phenylephrine 2.5%
  - Cyclopentolate 1.0%
  - ??
- Internal stereoscopic view

D

**Dioptr**

- Unit of measurement of the optical power of a lens utilized to prescribe corrective lenses
  - Plus (Convex-Magnifies an image)
  - Minus (Concave-Minifies an image)
  - Accommodation (Loss of focusing with age)

FTFC

**Full to Finger Counting**

- Gross measurement during confrontation fields
- What VF defects are identified by confront?
  - Scotoma (area of reduced vision)
  - Hemianopia (half of visual field lost)
  - Homonymous Hemianopia (same side)
  - Bitemporal Hemianopia

HA

**Headache**

- Identified during case history as non-specific symptom
- Many Causes:
  - Visual strain
  - Fatigue
  - Sleep deprivation
  - Stress
  - Medications/Recreational drugs
  - Sinus problems/Viral infections/Flu/Common cold
  - Head injury
Hx
Case History/History of Present Illness
- CC/RFV
- HPI
- ROS
- Medication
- Allergies
- PFSH
- FH

IOL
Intra Ocular Lens
Cataract Technology
- Multifocal- Restore/Tecnis
- Spherical
- Toric- Up to 3.5 cyl
- Aspheric- AcrySof
- Blue Light filtering

Myopic Technology
- -3 diopeters to -16 diopeters
- Less than - 2.5 cyl.
- Verisyse Phakic IOL- Anterior chamber
- Visian Implantable Collamer Lens- Posterior Chamber
- Between 92-95% achieve 20/20-20/40 vision

IOP
Intra Ocular Pressure
- Ocular hypertension was previously believed to be the most important risk factor for glaucoma
- In general population, IOP ranges between 10 and 21 mm Hg with a mean of about 15 or 16 mm Hg
- Diurnal variation plus or minus 3.5 mm Hg during a 24-hour cycle

KCS
Kerato-Conjunctivitis Sicca
Most common eye disease affecting 10-20% of women
- Symptoms:
  - Dryness
  - Burning/Stinging
  - Irritation/FB sensation
  - Redness
  - Itchy
  - Tired feeling

LP/NLP
Light Perception/No Light Perception
- Method of identifying level of vision in visually impaired
- LP= Extremely low vision
- NLP= Total Blindness= complete lack of form and visual light perception

LPI
Laser Peripheral Iridotomy
- Treatment: Holes burnt in Iris
  - Acute Angle Closure GLA- relieves pressure by allowing immediate outflow of aqueous humor
  - At risk Narrow Angles- to prevent angle closure
**LTP**

**Laser Trabeculo Plasty**

- **Treatment:** Holes burnt in trabecular meshwork in various open-angle glaucomas
- **ALT- high powered** argon laser applies tiny burns on the trabecular meshwork
- **SLT- selective lower energy** laser targeting the melanocytes in the TM resulting in less thermal damage

---

**MGD**

**Meibomian Gland Dysfunction**

- Swelling and redness of eyelid edges
- Symptoms of dry eye
- Frequent watery eyes
- Gritty, burning, itchy eyelids
- Sensitivity to light
- Frequent styes
- Misdirected eyelashes

**Treatment:**
- Lid hygiene- Commercially available scrubs (Ocusoft)
- Hot moist compresses
- Gland expression
- Omega 3s
- Oral Doxycycline
- Azasite
- Lipoflow

---

**MS**

**Multiple Sclerosis**

- Neurodegenerative **inflammatory** disease in which the myelin sheaths covering the nerve cells in the brain and spinal cord are damaged
- Most common autoimmune disease of the CNS

---

**NPC**

**Near Point of Convergence**

- Measurement of ability to cross eyes
- PD rule
- R/G penlight test
- Symptoms of Poor NPC:
  - Eye strain
  - Near blur
  - HA
  - Diplopia

---

**NS**

**Nuclear Sclerosis**

- Most common symptom is **Reduction in Vision**
- In later stage called Brunescent cataract
- **Causes:**
  - Age
  - UV-B
  - Trauma
  - Medications-corticosteroids
  - Genetics
  - Smoking
OD/OS/OU

- **Oculus Dexter**
- **Oculus Sinister**
- **Oculi Uterque**

PRK vs. Lasik

*Photo Refractive Keratectomy*

*Laser Assisted in situ Keratomileusis*

- Increased inflammation and slower recovery
- More postoperative discomfort, irritation, pain
- Cornea’s structural integrity is less altered
- No difference in ocular dryness
- Can correct between $-1.00$ to $-12.00$ D. of Myopia

POAG

**Primary Open Angle Glaucoma**

- **2nd leading cause of Blindness World Wide after Cataracts**
- 90% of all glaucoma cases in the United States
- Painless/No symptoms—Only 50% know they have it!!
- Gradual progressive visual field loss
- Increased cup:disc
- May have normal or high IOP (50%-67% of all POAG)
- Thinning of retinal fiber layers

PSC

**Posterior Sub-capsular Cataracts**

- Most common symptom is **Glare**

PVD

**Posterior Vitreal Detachment**

Symptoms:

- Flashes of light (photopsia)
- Sudden dramatic increase in floaters
- Ring (Weiss Ring) and floaters or hairs temporally
RAPD

Relative Afferent Pupil Defect (Marcus Gunn)

- Slower and decreased pupil constriction (appearing to dilate) during the swinging flashlight test
- Most common cause is a lesion of Optic Nerve

RD

Retinal Detachment

Signs and Symptoms:

- Flashes of light (photopsia)
- Sudden dramatic increase in the # of floaters
- Ring of floaters or hairs just to the temporal side of the central vision
- Dense shadow starting peripherally and slowly progressing centrally
- Veil or curtain over the field of vision
- Straight lines appear curved
- Central vision loss if full RD

RP

Retinitis Pigmentosa

Signs and Symptoms:

- Night blindness or nyctalopia
- Tunnel vision
- Peripheral vision loss
- Aversion to glare
- Slow dark to light adaptation time
- Blurring of vision
- Poor color separation
- Extreme tiredness

SLE

Slit Lamp Exam

Stereoscopic magnified view of ocular structures

- Adnexa- Lids and Lashes
- Anterior Seg- Sclera, Conjunctiva, Cornea, Lens, AC
- Posterior Seg- Vitreous, O.N., Macula, Retina

SPK

Superficial Punctate Keratitis

Signs and Symptoms:

- Red eye
- Tearing
- Foreign body sensation
- Photobia
- Burning

TBUT

Tear Break Up Time

- Assessment of tear film stability
- Normal > 10 sec
- Marginal 5-10 sec
- Poor < 5 sec
Clinical Terminology
A through Z

Anisometropia
- Greater than 2 Diopters difference between 2 eyes
- Symptoms:
  - Reduced Binocularity
  - Amblyopia
- Treatment:
  - Spectacle (Creates Aniseikonia)
  - CLs (Eliminates Aniseikonia)

Blepharo = Eye Lid/Lash
- Blepharitis
- Blepharo.chalasis
- Blepharoconjunctivitis
- Blepharospasm
- Blepharo.plasty
- Others

Cells and Flare
- Hallmark sign of Anterior Uveitis
- Cells
  - Leukocytes (Inflammatory white blood cells) floating in the convection currents of the aqueous
- Flare
  - Liberated protein from the inflamed iris or ciliary body which gives the aqueous a particulate, or smoky, appearance

Chemosis
- Edema of conjunctiva

Hyperemia
- Vasodilation
- Redness

Converge
- Inward movement of eyes to view a close object
- Adduction for Near
- Accommodative Demand

Diverge
- Outward movement of the eyes to view distant object
- Abduction for Far
Cycloplegia

- Paralysis of the ciliary muscle resulting in a loss of accommodation
- Cycloplegic Agents: Cyclopentolate, Atropine, Homatropine
- Uses:
  - Determine the true refractive error of the eye
  - Treatment of Amblyopia instead of patch
  - Treatment of Uveitis

Fusion

- Requires normal binocularity and results in 3-D vision

Suppression

- Eye or Brain
- Visually "Turning off" the image from one eye
- Inability to see 3-D

Dacryo

- Tears
  - Dacryostenosis
  - Dacryoadenitis
  - Dacryocystitis

Dermato

- Skin
  - Dermatochalasis

Phoria/Tropia

- Eso/Exo
  - Inward/Outward deviation
- Hyper/Hypo
  - Upward/Downward deviation

Phoria- only present some of the time

Tropia- Always present

Entropion

- Turning inward of lashes
- Causes Trichiasis

Ectropion

- Turning outward of lashes

Kerato = Cornea

- Keratoconus
- Keratitis
- Keratoplasty
**Myosis**
- Pupil Constriction

**Mydriasis**
- Pupil Dilation

**Pseudophakia**
- Natural lens of the eye replaced with IOL

**Ptosis**
- Drooping of the eyelid
  - Causes:
    - Muscular
    - Mechanical
    - Neurological
    - Degenerative

**Trichiasis**
- Turning inward of the lashes
  - Treatment:
    - Epilation of lashes
    - Bandage CL

**Rx Abbreviations**
- **bid** – two times a day
- **gtt** - drops
- **PO** - orally
- **qam** – every morning
- **qd** – every day
- **qh** – every hour

**Rx Abbreviations**
- **qhs** – every evening
- **qid** – four times a day
- **susp** - suspension
- **tid** – three times a day
- **TOP** – topical
- **ung** - ointment
Thank You!!

It’s been a pleasure to present to your group today!

Any questions???

Kris Kerestan Garbig, OD  krisgarbig@fuse.net