

## Outline: Managing peripheral field loss from fitting to training

- I. Most common conditions causing field loss, characteristics, functional loss
  - A. Glaucoma
    - i. Overall peripheral constriction
  - B. Retinitis pigmentosa
    - i. Overall peripheral constriction
    - ii. Peripheral islands
  - C. Cerebrovascular accident (stroke)/Brain injury
    - i. Hemianopsias
    - ii. quadrantanopsias
- II. Visual field testing for functional purpose
  - A. Humphery Automated Options
    - i. Estermann (monocular vs. binocular)
    - ii. SS Kinetic (monocular)
  - B. Goldmann
  - C. How to decide which may be most effective?
    - i. In cases of severe field loss (within 15 degrees), which test is more appropriate?
- III. Categorizing the field loss for treatment
  - A. Homonymous hemianopsia
    - i. Impact in daily living
      - 1. Difficulty reading, watching TV, and performing other daily life activities
      - 2. Increased risk of tripping, falling, bumping into objects, being struck by unseen objects, knocking over objects, and similar accidents
      - 3. Difficulty keeping one's place when reading
      - 4. Being startled by people or objects that seem to pop out of no where
    - ii. Identifying a good candidate
      - 1. Good remaining central vision
      - 2. Cognitively intact
      - 3. No difficulty with balance or muscle weakness
    - iii. Review prism characteristics
    - iv. Fitting protocol with Fresnel
      - 1. Choosing eye for initial placement
      - 2. Choosing prism power
      - 3. Base direction
      - 4. Prism apex location
      - 5. Monocular vs. binocular fit
    - v. Training skills to be addressed
      - 1. Obtaining base line skills for scanning and functional mobility training
      - 2. Awareness of prism
      - 3. Scanning skills
      - 4. Tracking
      - 5. Tracing
    - vi. Technique being implemented by our OT at the Center for Sight Enhancement

- vii. Considering Ground-in prism option
    - 1. After training and final apex position has been determined thru the initial use of the Fresnel
    - 2. Benefits of the transfer from Fresnel to ground-prism
    - 3. Optical options available
      - a. Hemianopic sector (Chadwick optical)
      - b. Gottlieb button
  - viii. EP-lens (Fresnel –like system)
    - 1. How it works
    - 2. Prism power/orientation
    - 3. Good candidates
- B. Overall peripheral constriction
  - i. Identifying a good candidate
    - 1. Visual fields vs. visual acuity
    - 2. Orientation & Mobility
  - ii. Fitting protocol for reverse telescopes (RTS)
    - 1. Choosing power
    - 2. TS options
    - 3. Fitting biotpic style RTS
  - iii. Training skills to be addressed
    - 1. Obtaining base line skills
      - a. Hand held telescope
    - 2. Orientation/perceptual
    - 3. Scanning skills
    - 4. Tracking
    - 5. Tracing
  - iv. Technique being implemented by our OT at the Center for Sight Enhancement
  - v. Other options
    - 1. Minus lens
    - 2. Sector prisms placed in the temporal position
    - 3. Orientation & mobility skills even without the implementation of optical devices

#### IV. Case presentations

- A. Hemianopic field loss secondary to stroke/brain injury
- B. Severe peripheral field constriction secondary to Glaucoma / RP

#### V. Summary

- A. Visual field loss can adversely affect independence in activities of daily living and limit functional mobility.
- B. Treatment options will vary depending on the type of field loss including hemianopic versus overall constriction.
- C. A multidisciplinary approach complements in-office prescriptions and training to maximize the likelihood that skills will transfer into a real-world functional setting.