Divergence Insufficiency

2014 NANOS: HANDS ON WORKSHOP
UTILIZING PRISM COVER TEST AND
PRISM THERAPEUTICS FOR THE
DIPLOPIC PATIENT

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Financial Disclosure

- I have the following financial interests or relationships to disclose:
  - AAP - Royalties
  - US Dept Health and Human Services - Consultant
  - Allergan – Consultant
  - Retrophin – Advisory Board

- None related to topic discussed this session
Case 1

- This 60 year-old woman with 2 week hx constant binocular horizontal diplopia corresponding to cataract extraction left eye

- D > N

- Noted decreased left eye vision 3 years ago, left eye inturning x 18 mo no diplopia as vision so poor
PMHx/PSHx/Meds

- SLE diag 1977
  - Retinal exams Q6 mo
  - Blood work Q3 mo
- Head trauma as child
- Facial surgery post trauma 10 years prior
- 2008 Cataract extraction + implant Right eye
- 2 weeks prior- Cataract extraction + implant Left eye

- Plaquenil
- Cortisone Injections
- Paxil
- ALLG - Sulfa
Exam

- VA → 20/25
  → 20/80 ph 20/40 (mild myopia)

- Color 8/8 OU
- Pupils – APD, -anisocoria
- SLE – Cornea clear centrally, AC D/Q, PCIOL OU good position
- DFE – NI OU
- Trigeminal fxn symm/nl
Near: ortho
BSV 12 ^BO
Divergence FA ▪ or NI
Diplopia Treatments

• Non-surgical options
  - Prisms for small deviations
  - Occlusion or Blurring
  - Orthoptics
  - Botulinum can be temporizing measure
Using Fresnels

- What power and orientation gives you BSV?
  - 12-15° Base Out
  - Treatment →
  - 12° Base Out
  - placed on glasses
• Stability
Other considerations?

- Place initial prisms
- Patch or opaque lens
- Tinted masking lenses
- Await stability before surgery
- Surgical options include weakening MRs, strengthening LRs, unilateral recess-resect or if age related tighten LR/SR band ligament
Mechanism of Divergence Insuff

- Deficit of a hypothetical divergence center in the central nervous system
- Tight inelastic medial rectus muscles preventing effective abduction
- Aging related lax/sagging lateral recti have been proposed as causative = ARDE (Age related Divergence Esotropia), Sagging Eye Syndrome
Take Away Points

- Consider in cases of adult onset diplopia where no signs of CN6/INO exist, versions full

- Try fresnel prisms –
  - Split bifocal vs task specific