

19 year old amblyopic girl with  
cataract surgery OS.

GOAL:

Want VA 0.5 (20/40) at OS to become  
accepted at the Ship's Officer Academy.

# History:

- 3 months old: High fever.
- 5 years old: Amblyopia OS. Small overfunctioning of the oblique inferior muscle OS. Ophthalmologist recommends occlusion 5/7 days. Prescribes a pair of glasses: OD Plano OS +0,50 sf. = -2,00 cyl. X 40
- Difficulty in getting the girl to accept the occlusion and the glasses.
- 8 years old: Stops consulting the ophthalmologist. VA OS some letters at 0.7 (20/30+) line but none at 0.5 (20/40)?!
- 19 year old: Surgery for cataract at amblyopic eye. Ophthalmologist recommends Rx: OD Plano OS +1,00 sf. =3,00 cyl. X 180 and an addition for reading OS.

# Symptoms

- Headache above eyes almost every day
- Tired eyes in the end of the day
- Poor at estimating distances
- Rereads words and covers sometimes left eye while reading.

# My examination

- HAB RX: OD Plano OS +1,00=-1,50X180
- DV With RX: OD 1.2+ (20/15) and OS 0.1+ (20/200+)
- NV With RX: OD 1.2+ (20/15) and OS 0.4 (20/50)
- Pinhole With RX OS improves VA to:0.2- (20/100-)
- CT distance: Small constant left esotropia
- CT near: Small exoforia

# My examination (continued)

- Motility: OS not smooth at all. No head/body
- Convergence nearpoint: X/10/15 (OS out)
- W4dot: Suppression OS distance and no suppression from 15-80 cm.
- 4Prism BO: Microstrabismus OS
- Randot stereo at near: No depth perception.
- Keystone Basic Binocular Suppressionstest: Simultaneous vision with add. +2,50 OS – no depth
- Red/green on wall: Lustre at 3 m and at 40 cm.

# My examination (continued)

- #7: OD +0,50 VA 1.2 (20/20+)  
OS +1,00 sf. =-4,00 cyl. X 7 VA 0.2 (20/100)
- #8: 2 ESO
- #9/10: X/24/4 #11: X/12/2
- #12: ORTHO #18: Could not measure
- #13B: ORTHO
- #14A: OD +2,50 OS +4,25 sf. =-4,00 cyl. X 7
- #14B: OD +2,00 OS +3,75 sf. =-4,00 cyl. X 7
- #15B 6 EXO
- CONTROL NEAR: #14B
- #16A/B: X/24/0 #17A/B: X/13/11
- #20: -4.00 #21: +1,00

# Performancetesting

- Brock String: 1m: Suppression OS  
80 cm: Weak string OS  
40 cm: Exophoria, fight: Ortho
- Davis Scan Test: Fast and nice.
- Groffmann: Very poor. Worse w/ add 2,50 OS
- No problem in walking crisscross back and forth
- No problem in balancing

# Recommendations

- Rigid contact lens OS as fast as possible
- A pair of plano glasses with Bangerter filter OD.
- New lens in glasses OS with full cylinder.
- A pair of reading glasses: OD PLANO OS +2,50
- VT!

# Visual Training Program (1)

- Eyecontrol, Near-Far Hart Chart, C-P Saccades
- Eyecontrol, Near-Far Hart Chart, Look hard – look soft, Flashlight pointing, Pointer Straw
- Greenwald Eyemovement, Drawing dots in circle, Near-Far Hart Chart, Mental Minus, Monocular Accommodative Rock (MAR)
- Greenwald Eyemovements, Mirror Overlap, Pointer Straw, Prism Opposite Ballgames

# Visual Training Program (2)

- Prism Opposite, Totties, Balance Board and Arrows, Labarge, Alternate Blinking
- Lustre in Space, Cheirosopic Tracing, Estimating Distances, MAR
- Towel Tupe Fusion, Meyers Flying Rings, Cheirosopic Tracing, MAR (patient begins to see double during the day and plays with it)
- Pepper Arrows, Loop Tees, Red/Green Colouring

# Visual Training Program (3)

- Brock Posture Board, Physiological Diplopia, Brock String, TBI
- Brock String, Chalkboard Double O's (rythm), Egg cup Game, Filling in O's
- Bug on String, Red/Green Fusion, Mirror Stereoscope, Filling in O's
- Mirror Stereoscope, See 3 Coins, Mirror Drawing

# In-Office Training (1)

- Prism Opposite Ballistic Pointing
- Haidingers Brushes
- Wallachs rings
- Stereoscope
- Balance Board
- Walk Through Swinging Balls (timing)
- Walking Rail
- Rotator Circles
- Trampoline (rythm)
- TBI

# In-Office Training (2)

- Motor Equivalent
- VO Stars
- Projected Vectograms
- Squinchel
- Rotator T's
- Visicare Dissociated
- Visicare Associated
- Keystone Fusion Games
- Dissociated Rotator
- Visicare Jump Ductions

# Status May 2009

- Patient still sees double
- VA OD 1.2 (20/20+) OS 0.4 (20/50) + 2 letters at 0.5, 0.6, 0.7 (20/30+)!
- When trying to fuse she overstimulates the oblique inferior muscle OS
- When relaxing she has the two pictures standing side by side.
- Progress evaluation at next visit in office

My Question in May at The EKISS:

Is this how far she can get?

# Advice from The EKISS

- Check design and fit of the lens for resulting the odd VA.
- Lack of training of the Reflexes

# Follow up on The EKISS Advice

- Contact lens fit is alright
- No Reflex Training – no education

# More Visual Training

- Tranaglyph and Near Vectograms
- Mirror Overlap Selfgenerated
- **Vertical Prism Jump**
- Big Excentric Rings
- Overlapping Pictures
- Coloring Smileys
- Brock Posture Board
- Polaroid Reading

# More In-office Training

- Projected Vectograms
- Keystone Fusion Games
- Squinchel
- Visicare Jump Ductions

# Further progress

- New prescription on top of rigid contact lens:
- OD Plano 0,5 Prism BD add. 1,00
- OS Plano 0,5 Prism BU add. 2,50
  
- Testet in-office:
- Perfect W4dot at distance & near
- Perfect Fix. Disp. at distance and near
- Patient felt reading became much easier.

# What now?

- Waiting for the patient to get her new glasses...
- Waiting for a second opinion on a ring of deposits central in the lens OS...
- Waiting for the patient to afford another in-office visit...
- Economi and Motivation seems to be a problem now...
- And I think we are SO close...

**THE END**

(thank you for listening)