

**Case Studies Presentation at 1997 CSO Conference
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I. Opening Remarks

1. All patients received 20 or more sessions of Photoptometric Light Therapy.
2. All patients with the exception of the Chronic Syndrome case (see history) received 12 or more vision therapy sessions following their light therapy treatment.
3. Visual fields were performed at the initial evaluation and then after approximately 6 sessions of treatment.
4. The field was taken one week after the completion of the entire 20 session of treatment. This is generally the last set of fields which will be shown during the presentation.
5. Normal progression of Visual Fields
 - a. Patient diagnosed as Convergence Insufficiency (no head injury or headaches).
 - b. Treatment was UV or bluegreen.
 - c. Six sessions between each field.
 - d. Watch progression of fields.

II. From the Orange side first - Alpha Delta (ad) Syndrome

- A. Also known as the lazy eye syndrome for patients with crossed eyes and/or amblyopia.
 1. To stimulate the sympathetic nervous system with a strong sensory-motor stimulant.
 2. ad (red-orange) is followed by ud (yellow-green) to leave the patient balanced after treatment.
- B. History of a 7 year old white female in the second grade.
 1. Referred by a commercial chain with a diagnosis of Left Intermittent Esotropia and Amblyopia with patching attempted.
 2. No complaints with school work, experiencing frontal headaches which Mom thought were sinus related. Unable to catch a ball, very clumsy, easily frustrated, upset stomach.
- C. Clinical findings
 1. Wearing +2.00 for 20/20 in her right eye, and +3.25 for 20/60 with no improvement single line and single letter in the left eye.
 2. Alpha omega pupil looked like left eye pupil"flashed"
 3. Versions were full. Pursuits and Saccades were both grade 2. Undershooting and a delayed response in the left eye. Midline Jump evident.
 - a. Pursuits- right eye "jiggled" and then jumped and landed precariously at the left side.
 - b. Saccades - the eyes and the head move together to locate the target.

4. Cover Test: Distance 10° Left Intermittent Esotropia
Near 20° Left Intermittent Esotropia
 5. Relationship of visual form field size to angle of strabismus.
 - a. The field will always be 2-3 degrees smaller than the angle of strabismus.
 - b. This puts the fovea outside the field of fixation
 - c. Why the patient does not see double.
 6. Initial Fields
 - a. Right eye - ten degrees
 - b. Left eye - ten or more degree field, eye with the strabismus.
 7. Stereofly present, Unable to obtain Randot, Titmus to 80 seconds of arc and Animals.
 8. No improvement with refraction.
 9. Distance findings:
 - a. Distance Lateral Phoria: 2 eso, unstable
 - b. Distance Vergences: Base In X/10/0, Base Out Target Suppression of the left eye.
 10. Near findings.
 - a. Near Lateral Phoria: 2 eso, with +1.00 3 exophoria, unstable
 - b. Above does not match with Cover test, expect mismatches, due to the Visual form field.
 - c. Near Vergences: Base In X/20/10, and Base Out suppression of left eye. With +1.00 Base In X/10/0 Base Out of the left eye.
 - d. NRA: +1.00 and PRA: -1.00
 - e. Push-up OD 12D, and OS 6D
 - f. Monocular Accommodative Facility: OD fatigued on (+) after 3 cycles, OS unable to clear either lens.
 - g. Binocular Accommodative Facility: Failed.
 - h. Visuoscopy: OD unsteady central fixation; OS 2-3 degrees nasal eccentric fixation; 50% of the time.
- D. A different set of filters for each field. Goal: Stimulate Sympathetic Nervous System.
1. ud (yellow-green) - opens up the field to at least 10 degrees. Patient received eight sessions.
 - a. Visual Field: right eye - forty degrees with enlarged blind spot, left eye - similar to right eye, blind spot less enlarged.
 2. aw (ruby) for 10 minutes, ud (yellow-green) for 10 minutes. Emotional stabilizer re-establishing the balance between the sympathetic and parasympathetic. Patient received eight sessions.
 - a. Visual Field: right eye- fifty degrees with blind spot almost normal
Left eye - sixty degrees with blind spot almost normal

3. ad (red-orange) for 10 minutes followed by ud (yellow-green) for 10 minutes. High sensory stimulant, plus intense motor stimulant to restore the acuity.
 - a. Visual Field: right eye - full visual field, left eye - full visual field.
Note blind spots are normal.

E. Clinical findings at re-evaluation.

1. New Prescription of +1.00 OU
2. Unaided Distance Acuity OD 20/20 OS 20/40 full chart and 20/30 single line. With Rx 20/20 in each eye.
3. Pursuits 2+, Saccades 2+, midline jump no longer evident.
4. Cover Test: Distance orthophoria, Near 10 Esophoria.
 - a. strabismus no longer present.
5. Stereopsis: Fly, Randot, Titmus present with Rx
6. Distance Findings
 - a. Distance Lateral Phoria: orthophoria
 - b. Distance Vergences: Base In X/10/4, Base Out x/20/4
7. Near Findings
 - a. Near Lateral Vergences: Base In X/10/2, Base Out X/10/2
With +100: Base In X/14/2, Base Out X/16/2
 - b. NRA +1.50 and PRA -1.50
 - c. Accommodative Monocular Facility: Pass OD/OS
 - d. Visuoscopy: OD steady and central, and OS central 50% of the time.
8. Summary
 - a. Patient had an esotropia and amblyopia with eccentric fixation.
 - b. Syntonics has left an esophoria. Patient then completed twelve sessions of vision therapy.

III. **Almost to the Middle with Yellow-Green or ud**

A. Mu Delta (yellow green) or the Chronic Syndrome

1. For an individual with chronic health problems due to glandular or organic imbalances, toxic conditions or past traumatic event.
2. Filter acts as a physiological stabilizer and detoxifier. Produces mild sympathetic stimulation and exo reflex.

B. History of a 47 year old white male with a history of familial cancer in the left kidney.

1. Currently on dialysis, yellow complected and receiving disability.
2. Experiencing blur, unable to read
3. Unstable on feet.

C. Brief clinical findings.

1. Moderate myopia.
2. Cover Test: Distance orthophoria
Near 10 exophoria
3. Did not receive VT therapy following Syntonic treatment.

D. Additional clinical information

1. Original fields were done in 1990. Patient received ud.
 - a. Initial visual field: right eye ten degrees, left eye thirty degrees.
Shape is obtuse.
 - b. Second field: right eye fifty degrees, left eye thirty degrees.
 - c. Third field: Both eyes have full fields.
2. Later field redone in 1994
 - a. Complaint at the time was depression.
 - b. Completed 10 more sessions of ud or yellow-green.
 - c. Felt recharged, field enlarged ten degrees.
 - d. Has remained stable.

IV. Just past the center to Mu epsilon or Blue-Green

A. Mu Upsilon (uv) or the Acute Syndrome

1. For an individual with acute problems relating to recent head trauma, anoxia, stroke or high fevers.
2. Patients are often suffering from headaches, hypersensitivity or pain.
3. This syndrome requires activation of cerebral depression through parasympathetic stimulation.
4. Produces an eso reflex.

B. History of a 15 year old white male with recent head trauma.

1. Referred by a psychologist for a visual processing problem.
2. Patient currently on 40 mg Ritalin and receiving home schooling.

C. Case is a classic convergence insufficiency

1. Patient appearance.
 - a. head tilt to left 25 degrees
 - b. squinting with both eyes
 - c. non communicative.
2. Unaided acuities, patient had no current prescription
 - a. Distance OD 20/25 and OS 20/20
 - b. Near 20/20 in each eye
3. Pursuits: Grade 1 Saccades: Grade 1
Eye movements are head movements.
4. Pupils PERRLA MG (-) and Alpha Omega Pupil

5. Convergence to Near Point (CNP)
 - a. Accommodative target 8/10"(break/recovery)
 - b. Penlight 12/14"
 - c. Red Lens 12/16"
6. Cover Test
 - a. Distance 4 exophoria
 - b. Near 20 exophoria
7. Stereopsis Intermittent, suppression with the left eye
8. Brock Posture Board
 - a. Left eye "turns off" first
 - b. Alternates with the right eye
 - c. right target moves up and then to left
9. Preferred mild nearsighted lens, not prescribed
 - a. the prescription will most likely change.
 - b. reading prescriptions in particular change.
 - c. yoked prisms are usually not helpful when the field enlarges.
10. Distance Findings
 - a. Lateral Phoria: 6 exophoria
 - b. Vergences: Base In X/16/0 Base Out X/16/0
11. Near Findings
 - a. Lateral Phoria: swings between 10 to 8 exophoria, unstable; with +1.00 gradient 14 exophoria
 - b. patient is switching between old and new pattern
 - c. Vergences Base In X/30/20
 Base Out X/8/0
 With +1.00 gradient
 Base In X/30/20-same
 Base Out X/12/0, reports SILO
12. NRA +1.25 and PRA -1.25
13. Accommodative
 - a. Push-up OD: 14D and OS: 8D
 - b. Accommodative Monocular Facility: OD/OS failed
 - c. Binocular Accommodative Facility: failed.
14. Initial Visual Form Field
 - a. Right eye: Triangular shaped field with monocular double vision. indicated by the two red dots connected by the white line.
 - b. Left eye: Oblong shaped field.
 - c. Note the difference between the size and field shapes.

15. Further History Relative to the Head Injury
 - a. When did the head injury occur?
 - b. February 22, 1994 when the patient's head was slammed against the wall for approximately 10 minutes.
 - c. case has gone to circuit court and are still awaiting a decision almost one year after the master hearing.
 - d. teacher is still teaching, patient was one of many students with complaints.

D. Treatment Considerations

1. An acute problem which is a closed head injury.
2. Primary optometric diagnosis is a Convergence Insufficiency.
3. Characteristic Visual Form Fields from head injury
 - a. monocular diplopia and blur generally inferior
 - b. points to edema and cortical swelling
 - c. Choose uv or blue-green to promote healing
4. Treatment
 - a. began with uv (blue-green)
 1. After nine sessions field in right eye has enlarged. In the right eye monocular diplopia has moved below the blind spot. Flattening at bottom of field. Typically seen with a closed head injury. When patient looks down suspect the lack of field causes a convergence problem.
 2. Left Eye: Field has opened to reveal the monocular double vision and blur represented by dotted lines.
 - b. after second visual field vwD (violet) for 5 minutes, uv (blue-green) for 15 minutes each
 1. Right Eye: Shape of field has shifted, typical of closed head injury, more "round". All monocular double vision gone.
 2. Left Eye: Shape has normalized, blur and monocular double vision has gone.
5. Other options, as we go to blue end and stimulate the parasympathetic system
 - a. start with uv, acts as an equilibrators plus intense sensory depressant.
 - b. adding (W) omega or indigo as a motor depressant before uv (blue-green).
 - c. further intensify by adding vwD or violet, as a intense sensory depressant plus motor depressant, before uv or blue-green.
 - d. Eight more sessions
 1. Right Eye: Normal field.
 2. Left Eye: Blind spot still slightly enlarged.

- e. Three months later, post vision therapy
 1. Right and Left Eyes: Normal fields and blind spots.

E. Re-evaluation after 20 sessions

1. Head tilt and squinting present intermittently.
2. Pursuits: 3 Saccades: 3
3. Cover Test
 - a. Distance orthophoria
 - b. Near swinging from orthophoria to 10 exophoria
4. Near Lateral phoria 16 to 14 exophoria, with swing; decreased with +1.00
5. Accommodative Findings
 - a. Push-up OD 8D and OS 8D
 - b. NRA +1.75 and PRA -0.50
 - c. Accommodative Monocular Facility: OD/OS passed
 - d. Binocular Facility: failed
 - e. Touch off/ Midline off
 - f. clean convergence insufficiency to complete treatment

V. **The Miracle Worker - Alpha Omega Syndrome - Both ends**

A. The Alpha Omega Syndrome (ruby) or the Emotional Fatigue Syndrome

1. Alpha means beginning and Omega means end
2. Alpha is the red end and Omega is the blue end
3. These filters balance the sympathetic and the parasympathetic for the patient.
4. Alpha Omega is followed by ud (yellow-green) for balance.

B. History

1. Patient is a 8 year old male in second grade.
2. Fifteen minutes of homework was taking 3 hours to complete.
3. Struggling to maintain a B-C average.
4. Patient eventually became an "A" student and was completing homework in ½ hour.
5. Entire family insists upon low illumination throughout house. Post syntonics the family uses normal illumination.
6. Patient screamed during first syntonics session. Did not adapt well to change.
7. Family went through a traumatic divorce, Mother has relocated and remarried.
8. Initial field
 - a. Right Eye: Five degrees
 - b. Left Eye: Two degrees

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C. Brief clinical findings

1. Alpha Omega Pupil

- a. large flash and remained dilated.
- b. pupils were similar to each other.

c. seen often in Cerebral Palsy, often difficult to judge field size.

d. Treatment:

1. (ud) yellow-green- Eight Sessions, goal is to enlarge field.
Need "jump start".

a. Second Field- Right eye twenty degrees,
Left eye twenty degrees. Note symmetry of fields.

2. (aw) ruby followed by (ud) yellow-green

a. Third Field- Right eye fifty degrees,
Left eye fifty degrees.

b. Fourth Field- Full fields with normal blind spots. Again
note symmetry of fields.

VI. Closing Remarks