

The Power of Effective Vision Therapy

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Received: February 01, 2019; **Published:** April 22, 2019

Abstract

Purpose: Referring for Vision Therapy services by the Primary Care Provider can be greatly beneficial to the health and well-being of the patient.

Method: A complete visual exam is done for every patient referred. This includes internal and external ocular health, entrance visual acuities at far and near, cover test and stereopsis testing, measurement of phorias and a range of vergences at far and near, assessment of accommodative flexibility and accuracy, refraction and objective retinoscopy findings (spot retinoscopy preferred) and any other special testing according to the patient's complaints derived in the history.

Conclusion: Not only should Vision Therapy (or Visual Neuro-Rehabilitation) be a treatment for consideration but often should be the first-line of treatment. Without the provider's consideration of Vision Therapy as a treatment option patients will continue on in life struggling with debilitating limitations.

Keywords: *Strabismus; Exostrabismus; Eyestrain; Vague Visual Symptoms*

Introduction

Functional optometric treatment came about from clinical observation of cause and effect. There as, functional treatments stemmed from clinical patient care; not from scientific studies. As a result, Vision Therapy has been generally dispelled, denied, and discredited by the majority of the medical community. Fortunately, current clinical research has confirmed what Developmental (Functional) Optometry has always known in the clinical setting.

Case Report

The Power of Vision Therapy - A True Story

V. U. was referred to an ophthalmologist and seeing him for over a year before she was referred to me for a full optometric binocular function assessment.

When V.U. first seen the ophthalmologist she was nine years old and in the 3rd grade. The primary complaints were that her mother noticed V.U.'s left eye "moving independently" especially when tired. She also had trouble reading. She couldn't keep the print together and in focus. She did see another eye doctor previously for glasses, but that doctor said she did not need them. There was no family history of eye problems reported. The findings at this time were visual acuity of 20/30 in the right eye and 20/30 in the left, exophoria but no strabismus, and with no significant refractive error (nearsighted, farsighted, or astigmatism). The ophthalmologist planned no treatment but to follow the case by way of return visits.

Five months later V.U. returned. She is now in the 4th grade. The complaint was that the left eye turns out during the day; and after about ten minutes of reading her eyes will hurt and she has to stop. The findings were as before: eyes healthy, exophoria, very poor stereopsis (stereo fly - animals 400", dots 800") and no significant refractive error. Another return visit was scheduled.

Six months later - about the same report, but this time V.U. was prescribed low plus single-vision lenses (+1.00 spheres for each eye) to "try it out".

After another six months, V.U. returned with the same complaints. She is now ten years old and will be entering the 5th grade. The findings by the ophthalmologist were similar except that V.U. had developed an intermittent exotropia of about 12 prism diopters (exostrabismus) her response to the stereo fly was animals 200" and dots at 80". The doctor didn't want to perform surgery because, after all, a surgical cure is anything within 15 prism diopters of eye deviation. The findings were discussed and it was decided to refer V.U. to me, Dr. Joseph Pederzoli, for an evaluation for "eye exercises".

I was challenged to resolve the visual problems of a soon to become 5th grader. Her oculomotor skills were weak, she had intermittent strabismus, poor depth perception with suppression- her Randot stereopsis measurement had variable responses; best response was to 85", visual acuities had dropped to 20/50 or worse, no significant refractive error, and the visual demand of school work was increasingly becoming more difficult. Her mother wanted V.U. to have better alignment of the eyes, to stop seeing double, have less eye strain, improve self-esteem, become less frustrated, and for V.U. to become more relaxed and happier.

I kept V.U. in the +1.00 spheres and put her in Vision Therapy (not "eye exercises"). I estimated about 30 office visits to meet those goals. Therapy areas indicated were fine ocular motor therapy, binocular motor fusion with stereopsis feedback, training physiological diplopia to control suppression, and visual-spatial movement with vestibular input. The techniques or modules used for Visual Rehabilitation were not outstanding in terms of any Vision Therapy practice. Fine oculomotor therapy with gross and fine motor integration, accommodative facility therapy, anti-suppression/sensory fusion using R-G Anaglyphs, simultaneous perception, and physiological diplopia as feedback mechanisms, Motor Fusion such as free space vectographs, aperture rule, and Keystone "Lifesaver" cards all utilizing convergence and divergence. Towards the end of the therapy visits, Accommodative/Convergence therapy was utilized "taxing" her binocular fusion with base-out/plus and base-in/minus facility rock (BOP/BIM). One Power of Vision Therapy is that acuity improvement therapy was not indicated. Acuity, which is just "visual grasping" improved with her general binocular function.

Twenty-two Office Vision Therapy visits later, V.U. was completed - all of the goals had been met. No strabismus, normal binocular depth perception (Randot to row F or 28"), no eyestrain, unaided visual acuity of 20/20 in each eye and 20/15 with both eyes, doing much better with school, and a much happier young lady.

I kept V.U. in the original +1.00 spheres for reading and scheduled a follow-up exam.

Seven months later, the above results stayed the same. This was also confirmed by the referring ophthalmologist.

Discussion

Ophthalmology should not wait for an exodeviation to become worse and then perform surgery nor should a child with Infantile Esotropia have surgery immediately. Optometric Vision Therapy should be a consideration for the patient's best possible outcome. The Convergence Insufficiency Study funded by the National Eye Institute (USA) clearly indicates this. Other statistical studies, such as the "Monocular Visual outcome in untreated Early Onset Esotropia", have shown that a child with Infantile Esotropia has a better chance of NOT developing amblyopia if NO surgery is done. We must begin to acknowledge that strabismus is not a mechanical eye muscle problem but a neurological problem that has connections with the vestibular system and the proprioceptive system as found through the discovery of the Feldenstruktur Fibers that innervate the extraocular muscles. The Power of Vision Therapy is merely utilizing the basic tools

of learned clinical knowledge that have been laid down for us in the past and have enlightened us today from current findings that firm up our clinical diagnostic and therapeutic capabilities. There was no outstanding or special therapy equipment used for this case [1-6].

Conclusion

Not only should Vision Therapy (or Visual Neuro-Rehabilitation) be a treatment for consideration but often should be the first-line of treatment. Without the provider's consideration of Vision Therapy as a treatment option patients will continue on in life struggling with debilitating limitations. This is a quality of life decision for the patient's best benefit.

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Volume 10 Issue 5 May 2019

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